for CONSTRUCTION

# FINANCIALTIMES

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\*\*\* 10p





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# Kaufman to visit kyjack ostages U.S. for **eed**

e Palestinian skyjackers collaborative arrangements on last night said to be future acrospace programmes at the Libyan Em with Boeing, Lockheed and Mcin Nicosia, Cyprus, having dened earlier in the day to up a five-crew KLM DC-9 ier as it carried 77 Dutch Westland Helicopters announced ingers over Tel-Aviv air-

e skyjack began shortly copters for the Miinstry of the airliner—it was carry Defence. Page 4 nolidaymakers from Malaga, n. home to Amsterdam—had off following a stopover in ter first landing in Tunis on skyjackers' orders, it re-ed in Cyprus and entered

li air space where it was

e aircraft then returned to time Fruit Carriers. Page 4 conduct for the sky

seen last night as an impor-success for President arios on the very day of a ral election in the Greek at Volkswagen ie release of the hostages fot sector of the island.

# abs arrange

# w Irish laws

Irish newspaper inflation in industrial countries. an open air pop festival. Page schedule by next summer.

### ke a letter 🕆 . Smith

### ∍y're off

speaks at Warm Springs, significantly higher than for men. Delano Roosevelt's er home. Back Page

### :fly . . .

le rate in Britain, at 7.5 per

is serving 12 years' jail for acquire 13 U.K.registered cargo gling arms into Israel.

Industry Minister, is to visit the

U.S. within a fortnight to discuss

aca airport in Cyprus, where the diplomatic negotiations lted in the release of the ages in return for a promise maker and distributor within two years. Page 8

■ VOLKSWAGEN: reported strong improvement in first-half banon suminit pay off past heavy losses which owing intensified fighting in anon over the past two days.

Foreign Ministers and 11 OGREEK CABINET will discuss

er representatives of Arab expansion of trade with Mr. sue states meeting in Cairo Edmund Dell, Trade Secretary erday, decided to call a stim- who started a three-day official on Lebanon for the third visit yesterday. Page 8. Greek y, the Palestinian Liberation omic objectives of the country inisation reacted with a were speedy integration into the HOPES THAT there will be Whether it materialises will believe that the guerilla war and for earlier talks. Back EEC and bolstering defence capability. Page 5

 PRESIDENT of Venezuela. terrorism laws now going would be "proper" at this time and final day of talks.

Igh the Irish Parliament and should be linked to the There was much lose of

has been spent dealing with the backlog that accumulated during

affiliated unions rose to a record U.S. Presidential election level of more than 11m. last year, nign opens to-day when Mr. A major factor was the rate of y Carter. Democratic candi- recruitment of women, which is

• NATIONAL HEALTH unions are to-day launching a renewed campaign aimed at putting pres sure on the Government to

harm many sectors of the U.K. Stone Manganese Marine and the moted by Stone Manganese and open quotations for titar or and through a string of industry, representatives of American company TiTech Inter-TiTech turn the peculiar proper- castings compiled by

was the lowest since . NEW FIGURES this week are is began in the mid-19th likely to indicate a slower rate ry, according to the Samaris of growth in bank lending. Page have been consulted.

FEATURES	TUC Congress	
ness men in Con-	FT SURVEY	11-9
stment in the U.K. 8	Aerospace	

ON OTHER PAGES ord inment Gulde Office World

Weather .... ind. ... World Econ. led. ... Base Lending Rates INTERIM STATEMENT ANNUAL STATEMENTS

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# Jones plan to link pay rises to living costs and efficiency

A plan to link pay rises to the cost of living, yet leaving scope for additional increases based on improved efficiency and productivity, was unveiled yesterday by Mr. Jack Jones, general secretary of the Transport and General Workers' Union and main architect of the social contract between the TUC and the Government.

inmanned radio-controlled heliscoper for the Minstry of Defence. Page 4

BERTAIN'S trade surplus in standard and medium-sized electic motors fell sharply in the firsthalf to £25m. after a 1975 recovery in which an overall surplus of £10m. was recorded Rack Page and Page 8

RESEARCH REPORT presents fresh. evidence that shies expending controls with sales and prices and prices of the ballot over the past few cars of tight pay controls. Explaining his proposals yes chances of the Government's deals to help ease some of the pressures which have begit up over the past few chances of the Government's deals to help ease some of the pressures which have begit up over the past few chances of the Government's inflation targets being achieved to the movement in the cost of Donnell Douglas as well as other

mands

registered under flags of convenience are a continuing threat the DC-9 circled Tel Aviv to shipping safety and anti-ort for three hours, the pollution standards. Page 32

Cabinet considered the Congression to survive the Congression to survive the policy could still suffer an embarrassing setback the for three hours, the pollution standards. Page 32

Cabinet considered the Congression to survive the condition to survive the Congression to survive the Congression to survive the Congression to survive the Congression to survive the condition suffer an embarrassing setback ship looks set for a successful past at the hands of the country's week's Congress which, although Em 38,000 merchant navy seamen promising widespread criticism bility who are deciding whether to of the Government for failing Mr. J

of the policy.

Mr. Jones gave details of some be the most damaging action they the movement in the cost of of his proposals for an could contemplate, a national living. In addition, he wants "orderly" return to normal strike having been virtually ruled provision for productivity and collective bargaining on the out except in the unlikely event pay restructuring deals to help eve of the annual TUC congress of an overwhelming demand in ease some of the pressures which have the property of the past few.

### Single figures

A secret ballot the results of tidying up of the TUC's somewhich are due to be announced what ambiguous policy on industo-day, is expected to be a fairly trial democracy and an expressible relief close-run thing, possibly with a sion of support for the Govern-small majority in favour of ment's devolution proposals for ndustrial action. Scotland and Wales.

The national executive of the In his blueprint for a return

ballut result. Sanctions such as Confederation of British Indusbanning week-end working or try to agree on a framework for blocking ferry services appear to voluntary pay limits based on

could be achieved without dis-Seamen apart, the TUC leader, advantages experienced in the

Emphasis would be on flexibility exercised responsibly, said Mr. Jones, stressing that the twin stimans' demand for the Curary Steam Ship Com-se of a number of convicted pany to-day begins top level stage industrial action aimed at to take sufficient steps to curb aims were to maintain a Labour rists, including the Greek negotiations with bankers and click archishop Capuccing pay rises which the rising unemployment, should government in office and effect our action in its \$62.9m. bid to The week also should see a unemployment. Further details of his strategy may emerge on Wednesday when he is due to calling for a planned return to collective beginning next year.
But it is the unemploymen

National Union of Seamen would to freer collective bargaining is expected in generate the most action could be justified by the ings between the TUC and the TUC delegates who are the property of the part of the superior of the transfer of feeling among the 1,000 or so more than 11m, workers:

# Hope grows of peaceful Namibia settlement

BY, BRIDGET BLOOM, AFRICA CORKESPOR

Namibia, South West Africa, in on the deliberations now due Rhodesians negotiating, creased here to-night as Dr. to begin in Dar-es-Salaam A key element is that the Henry Kissinger and Mr. John to-morrow between the four Presidents are believed once

ities and pose the threat of somment to editors. In mittee on energy and power has south African Prime Minister—

CONGRESSIONAL sub-comWhere the week-end Longitude on energy and power has south African Prime Minister—

Realizer was much less optimism that the discussions between the Angola.

Realizer was much less optimism that the discussions between the Angola. 

negotiations leading to a peace- depend in large part on reaction must be further escalated before ful transfer to mojority rule in from Africa, and in particular there can be any hope of white se press threat he believed a price increase Vorster prepared for their third front-line Presidents of Tanzania, again to be trying to achieve Zambia, Botswana and Mozam unity between the divided and final day of talks.

### 'Realities'

The talks, which both men of the future of the shorthand-importance for the future of the future of

There was much less optimism bique, and President Neto of Rhodesian nationalists. Although that the discussions between the Angola.

Dr. Kissinger Law had no direct news from Dares-Salaam since he arrived bere.

TRISH REPUBLIC'S 900 commercial bank branches open for customers to-day for the first time in 10 weeks. The past week backlog that accumulated during the nineweek pay strike by here in 10 the first than on the troubled arms supplies to and trade out the future of the first than on the troubled situation in South Africa itself.

# First titanium casting plant to go to development area

BY ROY HODSON

that industry will tell the Minis-national of California each ties of titanium to advantage. Williams indicates that many the street of Agriculture this week. Page holding 50 per cent. The site The metal is cast quickly and at sectors of British and European type of Agriculture this week.

22m. It is hoped to achieve a castings free from imperfections sponge plant in the north east steady build-up in production and it is claimed, as strong as where the crude metal is prosteady build-up in production and it is contained and duced.

after the plant opens in 1978 parts wrought by forging and duced.

The inauguration of a new

nique of casting this intractable either at Birmingham or metal. It may have the opposite metal. Although titanium is as Swanses. But that plant is not effect for the casting process is strong as steel and only half as likely to be in operation before economical in its use of titanium heavy and is one of the most the 1830s. Meanwhile, IMI is to as there is almost no wastage, corrosion resistant materials market in Britain titanium cast. Mr. Williams of TiTech has known to man it has presented ing made by Titan-Aluminium plans to recycle titanium as problems to manufacturing in Feinguss, of West Germany, much as possible in Britain dustry. The high cost of titanium The Stone Manganese-TiTech which may contribute further to it is five times more expensive amalgamation, in which Sir depressing the market for newlythan steel-can be offset by its David Nicolson, chairman of the refined titanium.

Stone Manganese Marine and the moted by Stone Manganese and open quotations for titanium probably will be at a Stone high temperatures into a mould industry, as well as aerospace Manganese plant but the two which is spinning and generating are interested in using the cost-companies are withholding centrifugal forces of up to 60 ings for applications including detailed information until unions times the force of gravity. As pumps and impellers in offshore have been consulted.

The initial installation will scientists call "a natural IMI is suffering from a world have two high temperature melt- affinity" for itself it tends to drop in demand for titanium. ing furnaces and casting facilities pack closely during the spinning The ripple effect has caused it involving an investment of about casting process. The result is to cut production at its titanium

with capital investment con-machining.

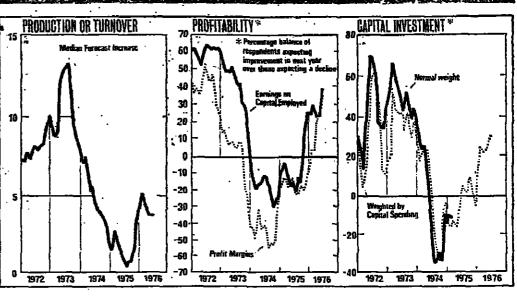
The inauguration of a new tinuing.

Imperial Metal Industries, the titanium casting industry in tinuing. Imperial Metal Industries, the titanium casting industry in Mr. Edward Williams, presi-only titanium-maker in Britain, Britain by Stone Manganese-dent of TiTech, was one of the has announced plans to establish TiTech and later IMI is not ploneers of the still novel tech- a commercial casting facility likely to sharpen demand for the

fighten legislation being conlike the legislation being considered by Parliament to phase out private practice in the NHS of traditional mass one page 8

Trench Archbishop sidered by Parliament to phase plant is to be built in a develop because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness, it has expected to play a prominent because of its lightness. But it has proved actually making castings in after the Vatican's conation of his first in Lille. EEC COMMISSION proposals
a Way, which runs 130 herm many sectors of the HE

# FT Monthly Survey of Business Opinion



# Setback for inflation hopes

chances of the Government's and prices remain at about is forescen, and there are no

wage costs have been revised industry's forward manpower harply downward since the requirements is no longer second stage of the pay policy deteriorating. But the number

-8 per cent., but the median than a spectacular fashion. A ever.

On unemployment, the out-liquidity.

came into operation. But the of companies expecting to take effect on total costs and on out- on more labour during the next

The median forecast increase remains in a mood of quiet con- and printing, also show that for wage costs over the next fidence. The recovery in activity export prospects are generally

FHE GROWING doubt over the forecast increases for total costs further recovery in profitability obvious worries on the score of

> Almost half the latest allindustry sample-which consists of the companies interviewed during the past four months-expect to increase their capital spending in real terms during the next year. But, in general, there is no present intention to launch into a stockbuilding boom.

12 months has now fallen to is proceeding in a steady rather considered to be as strong as

EARNINGS UN GAPITAL		4 monthly moving total			August 1970			
Those expecting ear	mings during current	May- Aug. %	Apr July %	Mar June %	Feb May %	Eng'g. (non-elec. %	Brews. & ) Distlirs. %	
1	Improve	54	46	45	48	48	95	83
	Remain the same	27	27	30	32	36	5	8
	Contract	15	22	22	18	76		9
	No comment	. 4	5	3	2			

C Statistical Material Copyright Taylor Nelson Group Ltd.

# Shipbuilding men join forces to oppose industry run-down

BY RAY PERMAN AND JOHN WYLES

and convenors from every major permanent feature of the inevitable contraction, Ireland have set up an unofficial industry after nationalisation.

resist the contraction of the tripartite talks under way shrink because of the At a meeting in Glasgow at Government and the organising But a resolution passed at the the week-end. Mr. James Airlie, committee of British Ship-Glasgow meeting declaring that convenor at Govan Shipbuilders builders. The Government is industrial action would be used convenor at Govan Shipbuilders builders. The Government is and one of the leaders of the hoping that these will produce a work-in at Upper Clyde Ship-common view on the problems builders, was elected chairman facing the industry and subof the committee. He said yester- sequent union acquiescence in

MORE THAN 400 shop stewards day that it would become a what is believed to be an

shipyard in Britain and Northern industry.

There is no clear view in Ireland have set up an unofficial The creation of the committee Whitehall or anywhere else on combined committee pledged to could have its first impact on the how much the industry needs to between the trade unions, the world shipbuilding market,

industrial action would be used Continued on Back Page



# Judging how far to squeeze

BY COLIN JONES

UP TO A POINT Mr. Peter A reduction of this magnitude Shore may have been on to is most unlikely to be achieved something when he told local without a pruning of town hall authorities that they should still staff, including the administrabe able to find ways of reducing tive core. Many councils have their expenditure which would gone about as far as it is possible avoid redundancies. The latest by drawing on natural wastage. analysis of their spending plans reducing the level of their ser-shows that just over half of this vices, and dispensing with the

annual congress takes place this those places where one or week and the Labour Party conference is still to come. This is nate. perhaps not the most propitious moment to provoke a clash with

By November, when next year's have to calculate nicely just how defensive efficiency, which, also simpler than it was.

While it would be unjust to be recorded, although one of the sons of Erin, Arsenal left back Nelson, hit City's left post, as the average goalseeking spectator is concerned. And who the spectator is concerned. And who confirmed his high promise of last promise of last promise of last promise of the sons of Erin. Arsenal were specially an attacking. urged forward by stantial investment demanded is incredible that, while other than the carnot expect the unemployment and another. Brady, who confirmed his high promise of last promise of the sons of Erin. Arsenal were specially and another. B

Viore pressing

Yet one suspects that it was not local profligacy with subsiders on much as more pressing political considerations which persuaded the Environment Secretary to tread circumspectly around the matter of redundancy. The continuing rise in unemployment has led to increasing restlessness among the Government of the local councils have been ment's supporters. The TUC annual congress takes place this sources sorting to preforming, and not just only in those places where one or

improvement.

The timing is right, however, overspending. Mr. Shore will match, crammed with plenty of donald made his work look defensive efficiency, which, alas, simpler than it was.

The timing is right, however, overspending. Mr. Shore will defensive efficiency, which, alas, simpler than it was.

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The timing is right, however, overspending. Mr. Shore will defensive efficiency, which, alas, simpler than it was.

The timing is right, however, overspending. Mr. Shore will defensive efficiency and the task of blunting Macford and the tas

Northants win their first

major cricket trophy

SOCCER . . .

CRICKET . . .

TENNIS . . .

RUGBY . . .

They deserved their venturing in levening in the could have been, but for the could have been, but for

# **Arsenal and City disappoint** a lot of high expectations

While on the subject of alone is still performing returns on investment, if Mac-dynamically as a brains-plus

WHILE the best things in donald is worth £333,000 for energy man in the powerhouse London and Manchester soccer Arsenal, how much then is the of a First Division side were happening elsewhere, value of Manchester City caparism and Manchester City distant Doyle, who played High Arsenal's other long-service men, appointed a lot of high expectations in a coal-less draw at High- of the same?

perhaps not the most propitious moment to provoke a clash with the more vociferous opponents of spending cuts, among whom are to be found public sector unions like the National And Government's face. If Mr. Shore Local Government Officers' squeezes local councils too far too many over-spenders Union of Public Employees, choose not to fall into line, we With luck, if the issue is fudged until after the conference season revolt next spring and Labour is out of the way, the underly-is out of the showing signs of improvement.

Blow back

Indeed, the grant mechanism to the boring methodists of Arsenal into of times during the first half-bury. It proved, if proof were needed, that it will take deeds, not of transform the strong, long, and wide a couple boring methodists of Arsenal into of times during the first half-bury. It proved, if proof were needed, that it will take deeds, not of transform the strong, long, and wide a couple boring methodists of Arsenal into of times during the first half-bury. It proved, if proof were needed, that it will take deeds, not of transform the words to transform the words at the end of last season by needed, that it will take deeds, not of times during the first half-bury. United manager, incredibly freed to vords. The exciting crowd-pleasers in concept with the new image one needed treatment for leg expects of a side managed by Mr. Terry Neill . . and deeds, not of significance. But, for the words, to transform Manchester last bour of the game. Dovie's command in the air, his superb salesmanship of players command in the air, his superb salesmanship of players command in the air, his superb salesmanship of players command in the air, his superb salesmanship of players command in the air, his superb salesmanship of the superb salesmanship of the players of the side that excells and the speed and assurance with which he carried like the could be added to only th

# Merit table of English rugby

RACING

NEW YORK. September a separate standard of the situation. Both eventually fell to the wiles of saturday, giving this outstanding record in this complete friendly, unglamorous country their first major title.

They deserved their victory, which could have been, but for the tactical naivety of their captiled and part of the tactical naivety of their captiled and the part of the standard the the tactical naivety of their captiled with a sound ency of their later batsmen to panic, even easier.

They deserved their victory, the first major title.

They deserved their victory, the first major title.

They deserved their victory of their captiled with a sound and ency of their later batsmen to panic, even easier.

There is a super title and the part of the situation. Both eventually fell to the wiles of the situation. Both eventually fell to the wiles of the situation. Both eventually fell to the wiles of Bedi, and Lancashire seemed to finish with a total condemmed to finish with a total of under 180 until that it is seven of the selected women hard, quick wicket with rather first major title.

They deserved their victory, which could have been, but for the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discussed. It emerges that the Morthern group took the firment of the county championship was discuss

The new club complex reflects well on Clifton and it is a heart-warming fact that the same efforts are being made in clubs throughout the land with the help of the RFU, county unions, and heavest patternilly here. brewers — naturally — but mainly through club efforts:

the first period and so lost \$4.34. tion of the runners including. After two encouraging seq. Clifton's best performers were the first and second favourites, place efforts in strong compa williams in the second row. Marquis de Sade and Campero, this handsome son of the O Williams in the second row, Cannon at scrum half, who made some delicate breaks, the left Cannon at serum half, who made some delicate breaks, the left wing Lowe and, Johnson in the centre.

State Pension, State Pens

If Clifton are to match their surrounds they must first improve their tackling, which was woeful. Luxmore showed how on Ripley and Lowe on Duckham, but otherwise only the

# Britain's big tennis hope beaten

NEW YORK, September ,

the county championship was discussed. It emerges that the Northern group took the firmest line and that the championship will stay for the present.

What seems odd is that the majority of placers I have the country of placers I have the country the line and that the championship will stay for the present.

What seems odd is that the majority of placers I have the seems of placers I have the

# Millionaire seems heade for sterling victory

WITH THE St. Leger, which will considerably easier pickings.

Kindest thing

Perhaps the kindest thing that could be said of Clifton's effort was that they won the second half 34-32 but conceded 52 points in the first period and so lost \$4.34 they was that they was lost \$4.34 they would be said of the minutes including the first period and so lost \$4.34 they was that they was lost \$4.34 they was the first period and so lost \$4.34 they was the first period and \$4 Piggott, whose record in England's classics is unequalled by an own brother to Welsh C any other jockey this century, can make up for a costly Rigmissed an eighth St. Leger last venture by taking the Rusyear when he opted for King Nursery, in which Red John Pellingre in preference to Result is another with strong classes.

Pellinore in preference to Bruni, is another with strong claims

2.15—Roman Way\* 2.45—Rosseila Bella 3.15-Welsh Friend\*\*\* 3,45-Millionaire 4 15---Grecian Bond. 1.45—Expadeo" 5.15—Out of Season HEXHAM 2.15—Silver Gal 2.45—Old Steven

3.15-Pirate Gold DOMINIC WIGA

I am hoping that Welsh Frid

WINDSOR

# **V** Radio

† Indicates programme in

7.05 a.m. Open University (UHF) 2.00 TUC Congress report to 4.30. for Wales.

5.55 Nationwide. 6.50 Some Mothers Do Ave 'Em. 7.20 Angels. 8.10 Panerama. 9.00 Nine O'clock News.

19.25 Dirk Bogarde in "The Mind Benders."

7.05 a.m. Open University (UHF Wales—1.45-2.00 p.m. Pili Pala. only), 12.45 p.m. Mid-day News, 5.55-6.50 Wales To-day, 6.50-7.20 1.00 Pebble Mili, 1.45 Trumpton, Heddiw, 11.40 News and Weather 4.18 Regional News texcept London). 4.20 Play School. 4.45 Go With Noukes, 5.10 Play Away.
5.40 News.

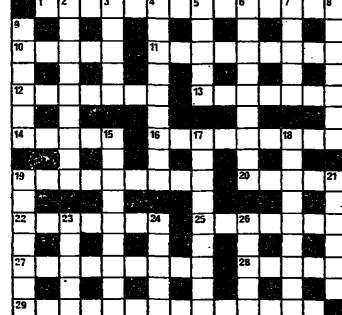
BBC 2

All Regional programmes as

Northern Ireland—4.18-4.20 p.m. Northern Ireland News. 5.55-6.25 Scene Around Six. 6.25-6.30 Land 'N' Larder. 11.40 News and Weather for Ulster.

6.46 a.m. Open University. 11.10 The War Lords. Talk by 11.00 Play School.

# F.T. CROSSWORD PUZZLE No. 3,175



A. J. P. Taylor. 11.40 Weather/Regional News.

7.30 News on 2 7.40 Presents Past

5.00 p.m. Open University. 7.05 Carry On Learning (part 1).

Closedown: Louis Simpson reading.

# LONDON 11.20 Channel Lunchtime News. What's on where. 5.15 The Remarkable Rocket. 16.00 Channel News. 16.10 Cartoon Time. 12.00 Issi Comes The Future: Universities. 11.00 Noho. 12.10 p.m. Pipkins. 12.30 Cailber Plague. 11.55 News and Weather. 12.00 Lunch-time To-day. 1.30 Lunch-time To-day. 1.30 Lanch-time To-day. 1.30 Lanch-time To-day. 1.30 Lanch-time To-day. 1.30 1.20 Lunch-time To-day. 1.30 Marked Personal, 2.00 Good After-noon. 2.25 Trades Union Congress. 3.50 Emmerdale Farm. 4.20 Clap-

perboard. 4.45 The To-morrow People. 5.13 Batman. 5.45 News from ITN. 6.00 To-day. 6.45 What's On Next? 7.30 Coronation Street. 8.00 George and Mildred. 8.30 Pilger. 9.00 The Sweeney.

19.43 a.m. Phocais 5. 11.05 Keep Britain Sum 11.30 Mill On The Move. 12.30 s.m. Afuar. 1.25 Anglis News. 2.00 Houseparty. 4.20 The Romper Room. 5.15 Supersorie: 6.00 About Anglis. 19.30 Lifestyle. 11.00 Westery Movie. Banacek, 12.20 a.m. Reflection.

9.00 The Pallisers starring
Susan Hampshire and
Philip Latham (part 21].
9.55 Inside Medicine, Electroconvulsive therapy.
10.25 The Gun (part 9).
10.40 Diversions: Music by
Paganini, Tchaikovsky;
Bach and Elgar.

11.55 am. Keep Britain Sim. 11.30 The Move 11.20 p.m. Border
News 2.30 Houseparty. 5.15 Dr. Seuss
Un The Loose. 6.30 Border News and Lookaroand. 6.15 Garouck Way. 2.00
Lucky Feller. 10.00 News and Border
Weather. 10.01 The Best Of Upstairs,
Downstairs. 11.30 The Protectors.
f12.00 a.m. Border News and Weather.

CHANNEL

**GRAMPIAN** 

The Mill On The Move, 1.20 Grampian News, 5.15 Supersonic, 6.00 Grampian News, 5.15 Supersonic, 6.00 Grampian News and Weather, 6.10 out of Town, 10.30 Monday Movie "The Redgrave Triu." 12.08 Evening Prayers, GRANADA

9.38 a.m. What Have You Done With My Country. 19.20 Waft Till Your Father Gets Home. 19.40 Holiday Matthee. 11.50 Chess Masterpleces. 12.30 p.m. The Galloping Gournet. 1.20 The Pied Piper. 5.15 Supersone. 6.00 Granada Reports. 10.30 Goostry. A Village. 11.30 Appointment With Fear.

Crawford, 12.30 p.m. The Amazina World of Kreskin. 1.20 ATV Newsdesk. 5.15 Supersonic. 6.00 ATV Today. 10.30 11.80 a.m. The Sweet Sugar Doughnut. Platform For Today. 11.15 Police Story. 11.05 Keep Britain Silm. 11.30 Docu-

Report. 2.00 Honseparty. 5.15 Supersonic. 6.00 Watch This Space. 6.30 Crimedesk. 10.30 Late Call: Rev. Tom Gordon, Old Kirk: Edinburgh. 10.35 Pay Or Die with Franci Research. **SOUTHERN** 

TYNE TEES 11.00 a.m. Starting Point. 11.05 Keep Britain Silm. 11.30 The Mill on the Move. 12.30 A Place in Europe. 1.20 North East News and Lookaround. 6.00 Today at Six. 6.40 Police Call. 10.30 Lifestyle. 11.00 Boncy. 11.55 Epilogue.

ULSTER 11.05 a.m. Keep Britain Slim. 11.30 Documentary. 12.30 p.m. Affoat. 1.28 Ulster News Headlines followed by Lumch-time. 2.00 Women Only. 3.48 Ulster News Headlines. 5.15 Inner Space. 6.00 HTV ime. 200 women Only. 3.43 Ulster News headlines. 5.15 Inner Space. 6.00 LTV Reports. 10.30 Monday Night with the Rev. David Burke. 139.35 Monday Movie Oscar Wilde starring Robert Moriey and Phyllis Calvert.

9.00 The Sweeney.
10.00 News At Ten.
10.00 News At Ten.
10.00 News At Ten.
11.00 London-New York.
11.00 London-New York.
11.00 Dan August.
12.25 a.m., Andrei Sinyavsky's
"Unguarded Thoughts."
All ITV regions as London except at the following times:

ANGLIA

ANGLIA

ANGLIA

ANGLIA

ANGLIA

ANGLIA

ANGLIA

Bertain Sim 11.30 Mill on The Move.
12.30 p.m. Advar. 1.25 Anglis News. 2.00

Bertain Sim 11.30 Mill on The Move.
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Businessman's Diary

Current .......... MAB International Fashion Fair (cl. Sept. 8) Current .......... Int. Watch and Jewellery Trade Fair (cl. Sept. 9)
Current ........... International Air Show (cl. Sept. 12) ..... Northern Floor Coverings Fair Sept. 7—Oct. 9 ... BSI/Des. Council: "Living Standards" Sept. 12—15 ..... Menswear Fashion Fair Sept. 19—22 Self-Service Display Equip—SHOPEX
Sept. 19—22 Northern Packaging Exhibition
Sept. 20—24 Int. Broadcasting Convention
Sept. 21—23 Electronic Instrument Exhibition
Sept. 21—24 British Premiums Show
Sept. 22—Oct. 2 Int. Machine Tool Exhibition
Sept. 23—25 Nat. Forest Machinery Demonstration
Sept. 23—25 Nat. Forest Machinery Demonstration
Sept. 27—30 Autumn Floorcoverings Fair
Sept. 27—30 Autumn Floorcoverings Fair
Sept. 27—Oct. 1 Int. Plant Engineering and Maintenance Exhibition
Sept. 28—29 EIA Engineering Exhibition
Sept. 28—30 Electronic Instruments Exhibition
Sept. 28—30 Mailing Efficiency Exhibition
Sept. 28—0ct. 2 Subcontracting Industries Exhibition
Oct. 4—7 World Offshore Exhibition
Oct. 4—7 World Offshore Exhibition

Sept. 28—10 Sept. 28—10 Subcontracting Industries Exhibition
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Nat. Exbn. Centre, B'ham. Royal Lancaster Hotel, W3 Farnborough Exbn. Centre, Harrogate Design Centre, S.W.L. Belle Vue, Manchester -Old Town Hall Aberdeen Harrogate Metropole Centre, Brighte Nat. Exbn. Centre. B'ham

### Oct. 4-7 ....... World Offshore Exhibition

OVERSEAS TRADE FAIRS AND EXHIBITIONS Current ...... International Packaging Show (cl. Sept. 8) Current .......... International Autumn Fair (cl. Sept. 12) Sept. 13—16 ..... 5.13 The stupper source along the Law.

WTV Cymra/Wales—As MTV General 19.30 Journal. 10.35 Ed Allen Time.
Service except: 1.20-1.25 s.m. Penawdan 10.30 Journal. 10.35 Ed Allen Time.
Newyddion y Dydd. 2.00-2.25 Hamdden.
He Riverbank. 11.35 Technodash. 11.35
Sept. 16—19 Scandinavian Fashion Week
Sept. 16—19 Scandinavian Fashion Week
Sept. 17—20 International Fair
Sept. 18—23 International Fair
Sept. 18—23 Italian Furniture Fair
Catch Kandy. 11.30 s.m. Report West HeadInc. 6.20-4.35 Report West HeadInc. 6.22-4.35 Report West.

Sept. 18—26 Sept. 18—26 German industries Exhibition
Cacego: 1.30-1.30 s.m. Report West HeadInc. 6.22-4.35 Report West.

Sept. 21—25 Int. Oil Pollution Exbn. and Conf.
Sept. 23—29 Video '76
Sant 22—Oct 1. SICOB: Office Equipment Exbn. Sept. 23—29 ..... Video '76
Sept. 23—Oct. 1... SICOB: Office Equipment Exhi.
Sept. 27—Oct. 1... Ocean Development Exhibition

Tokyo Cannes Stutteart Cologne Zagreb Paris Ghent Johannesburg Copenhagen Florence Milan Stavanger Cannes

Europa Hotel, W.1

### Oct '5-8 ....... Gastech LNG/LPG Technology Equip. Ex. and Conf. New York BUSINESS AND MANAGEMENT CONFERENCES

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Management Centre, Slough London Hilton, W.1 20. Duchess Mews, W.1 York University Swindon Bonnington Hotel, W.C.1 Nat. Exbn. Centre. B'ham. Melton Mowbray, Leics. 68, Churchway, N.W.1 Uxbridge, Middlesex Bournemouth Cannock, Staffs. London Hilton, W.1 Ulster House, N.W.1 Sheffield Royal Lancaster Hotel, W.2 Carlton Tower, S.W.1 Parker Street, W.C.2 Training Centre, Egham Bloomsbury Centre Htl., W.C. Notis, University Aberdeen University Royal Lancaster Hotel, W2 Waldorf Hotel, W.C.2 Royal Garden Hotel, W.S Eastbourne

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# tem The Coronation of Poppea

by RONALD CRICHTON

bough it is not so very long persist over-the years. I am sure hought it is not so very long persist over-the years. I am sure historic received by the transfer of the precision of the precisio

i tenor and Oftone a baritone, uncertainty about the timing of you have a tenor, you lose song and movement. Barbara art from purely musical con-Walker, Sandra Dugdale, Ian trations) a useful dimension Caley, and Terry Jenkins added unreality which somebow to the various pleasures of the unreality which somebow to the various pleasures of the ceredible if not more accept. Anne Collins in the rewarding the Nero of this revival is role of the nurse, Arnalta, was an Leggate, a young tenor of warm and funny without being tinction who sings the role too broad for the music. Sarah and has one or two moments Walker as the cruelly-used teal incisiveness and authority Empress Ottavia (in fact his acting—there are others a more interesting, complex

ig quite motionless over the to contribute. Christian du sing duet for Nero and Plessis as the hapless Ottone pea. (whose misfortune it is always he opera is given in Raymond to seem a goose). displayed pard's realisation, with Nero plenty of voice but occasional tenor and Ottone a baritone. uncertainty about the timing of

real incisiveness and authority Empress Ottavia (in fact his acting—there are others a more interesting, complex ere he is more like a school character than Poppea, was fect having unseemly tan-admirable in her resigned sadms. Once one has seen a ness and in the regal reticence in discovering the seen and in the regal reticence in discovering the seen and soprano Nero, it is hard to which robbed her of easy applause but was absolutely here is so much character right. Noel Davies, at first a Poppea's music that it can little shy of the instrumental come identified in the listener's colours with which Leppard has not with certain singers. Some furnished his score, later lections of Magda Laszlo, the blended voices and accompanist Poppea at Glyndebourne, ment most sensitively.

### lestminster Cathedral

# Messiaen & Bruckner

by DOMINIC GILL

It was in 1971 that the Proms images: the stepped pyramids of ll, at the bidding of William ancient Egypt. Romanesque and ock, to offer more specialised catalysts to the five short, powerncerts of contemporary music ful movements of Messiaen's the Round House and per musical ritual of Resurrection. commances of grand, antiphonal And how pungent they still the tasks like Monteyerdi's Vespers sound, 12 years now after their the Missa Solemnis in the composing distilled essence of acious acoustic of Westminster Messiaen, alive with bittersweet

DOMNIC The Cathedral's high vanits ment, honeyed razor edge, tender fire.

colour and resonance for the colour and resonance for the

reussion pre-supposes just such yet a whole inspiration, but a ample acoustical setting—the piece of a dozen or so memorable uposer himself envisaged parts, remembered (and st each hurches, cathedrals, even per new performance experienced mances in the open air, or again) with somewhat less than mountain heights." The music devotion, but with genuine born of strong and simple affection.

# The Worst of Kenneth Robinson

by B. A. YOUNG

nts drily on the London ne, with a special leaning rards culture. His material ninds one of old volumes of nch, with its determinedly ht-hearted approach to every

OVIER

Nottingham autumn

nch, with its determinedly hishearted approach to everyng, its reliance on comic missangs in guide-books and ngs, its rigidly Philistine starts on September 18 (after itude towards "modern" art one preview) with Othello. Daniel Massey will play the name part and Timothy West in which he always lears, and which in the tradical manner sometimes get of sync.

Surf even in a dentist's waiting in mome wouldn't devote one of so long to this kind of ockery. If Mr. Robinsom would out the worst of Kenneth airson—and how awful it is performance of Sternheim's hits easy puns and sly crences to lavatories—he uld be left with a pleasant play. The Magnical properties are repertory on December 13 there hour long instead of two better the post of the stage of the stage of the stage with a called ning's entertainment about eaters the repertory on December 13 there hour long instead of two better the world then have to The Sleeping Beauty.

The same part and Timothy West in Chole. Daniel Massey will play the name part and Timothy West in the challenge of the stage with one to make previously with Othello. Daniel Massey will play the name part and Timothy West in the challenge of the will open on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; these two will play in repertoire until a poen on September 23; the poen of September 24; to most it means a few windsor coping with likeable longhairs. As a subject for the theatre it from the Lovely and Talented in this sloopy is a subject to the band the sampled track from the album initiation. West Coast revolutions a

# AUSTRALIA.

cess he would then have to The Sleeping Beauty.

The Financial Times Survey entitled 'Australia' which was to have been published on August 31st will now be published within the newspaper on September 8th 1976.

**Cardiff New Theatre** 

# Orpheus in the Underworld

by ELIZABETH FORBES

Shakespeare was right - as the street outside the Bouffes has been blunted by a concep-

usual — when he wrote that Parisiens; the piccolo player fell tion of "good taste" now itself sorrows "come not single spies ill; the composer was further out of date by a couple of but 10 battalions." The Welsh beset by balliffs, Germans decades.



Peggy Troman and Julian Moyle

Coliseum

# Tosca

by ELIZABETH FORBES

The Cathedral's high vanits ment, honeyed razor-eage, tender if week gave marvellous depth fire.

A Thursday's performance of can give the illusion of total Johanna Peters of Gesualdo motets with which an Eliot Gardiner and the lacked a degree of hard sinew sinteverdi Choir and Orchestra and muscle, but a committed Lorina Haywood. Miss Haywood, wry courage that suffices very reading languorous in "Le gestian and Bruckner—a magical prefude, sung from behind clear in the stuttering Geneian music of "Ils ressurciteront, high altar, for all its glorieux," thrilling in the protonalic anguish, gravely, cessional finale.

romatic anguish, gravely, cessional finale. The evening ended with a very renely beautiful.

The evening ended with a very renely beautiful.

The scoring of Messiaen's Et fine account, beautifully shaped specto resurrectionem mortuland shaded by Mr. Gardiner, of an for woodwind, brass and Bruckner's E minor Mass—never music. Without this quality, cowardly Spoletta and John passionate abandonment to the Sacristan, Terry Jenkins's music. Without this quality, cowardly Spoletta and John a Tosca can be good, but she Kitchener's enigmatic Sciarrone

a Tosca can be good. but she kitchener's enigmatic Sciarrone cannot be great; with it, she needn't be great, but she can't be uninteresting.

When Miss Haywood proclaims that "Life has taught me singing and loving" (I quote; Edmund Tracey's translation' from memory) one believes her utterly. When she defiability tells Scarpia that she loathes him, one is equally convinced by the truth of the emotion. She sings, as a really fine Tosca should, as if she were in love with the music. Tom Swift, who has taken over the role of Cavarodossi, does not pricture of dawn breaking over text a very romantic figure on Rome. David Lloyd-Jones conducts a full-blooded, but never The worst of Kenneth Robin-say less often that he is about is that he goes on so long to conclude, a promise that he is a pleasant, bland chap made and broke half a dozen o sits at a plane under a times in his last half hour.

The worst of Kenneth Robin-say less often that he is about the role of Cavarodossi, does not picture of dawn breaking over cut a very romantic figure on Rome. David Lloyd-Jones constage and vocally does not seem ducts a full-blooded, but never to find Puccini quite as congenial over-stressed performance of as Verdi. Nevertheless, he too Puccini's masterly score.

Roundhouse Downstairs

tion. "The people's festival" "Despair", and he is prelude was no such thing, and the show tantalisingly hints at that a reasonably funny had rock with the occasional sketch routine that is delightfully interinvolving a mercenary hot dog rupted by policemen in black oilvendor, a bone-head hippie or a skins accusing the drummer of stoned, dirty rocker. "going a bit fast" and the bass untaritated partner and his tentouth old child. This tale of the theatrical achievement minimost the big sounds is abandoned writer with something interest-

of the big sounds is abandoned writer with something interest as easily as it is adopted. And ing to say and a director who the same carelessness of writing shares my conviction that the introduces a fascinating fantasia Lovely and Talented Theatreon the police infiltration of the band could yet come up with a event before dropping it in real rock musical. Well, at least favour of more music from the something better than T. Zee.

# Maskerade premiere in Glasgow

unperformed Russian Maskerade will play in reper dramatic classic and rarely toire with Brecht/Weill's The presented American, German and Seven Deadly Sins of the Lower French plays join three English Middle Class which opens on tomedies and a new play to make September 24. This play will be up the seventh season of the directed by Geoffrey Cauley, Citizens' Theatre Company working with the Citizens' Comdirected by Giles Havergal.

The season opens on September designs are by Philip Prowse.

10 with the first presentation outside Russia of Lermontov's October 22. Directed by Giles lated for the first time into Havergal and designed by English by Robert David Mac Geoffrey Rose, this will be joined Donald, associate director of the on November 12 by American Citizens' Company, who also author Paul Foster's fairground directs the production. history lesson, Elizabeth I,

**ICA** Theatre

# Music to Murder By

by B. A. YOUNG

so what is left? A diffuse plot, some witty lyrics, admirably translated by Wynford Vaughan-Thomas and George Barker, and one of Offenbach's finest scores, in a particularly full version, spiritedly conducted by Julian Smith and played with evident enjoyment by the Welsh Philharmonia. As well as the familiar gallop and can-can there is a Dance of the Hours to greet the dawn on Mount Olympus and a ballet for a swarm of files to confuse the issue after Jupiter chooses this disguise for his seeduction of Eurydice; the extra "music is delightful, but slows down the action to a special solution and continued to the continued of the company playing this strangles her with a guitarian straing. Paines Plough is the name of the company playing this fescinating piece, and they play fescinati

The New Theatre pit has been rebuilt, and now extends under the stage (after the model of the Theatre Royal, Glasgow); consequently the balance be-tween voices and orchestra has improved. Orpheus, with its large cast of gods and goddesses, makes heavy demands on the singers; at Cardiff some minor roles, though competently sung,

David Pownall's Music To only to be wandering actors strained portrait, even if he pre-Murder By was building up good playing in a game, but the game fers common-or-garden sex and word-of-mouth support in Edin-they act out is no light enter drink to black magic.

Edinburgh Festival

# Morning concerts

by RONALD CRICHTON

lyrics. Honourable exceptions to this stricture are Rita Cullis, an elegant amazone of a Diana, and Terence Walters as Mercury, fully preoccupied with Oypman communications.

Norma Burrowes makes a bewitching Eurydice, and sings with great charm, while Arthur Davies is an amusing and lyrical Orpheus (his violin class, average age six or seven, plays his latest composition enchantingly); but the performance is dominated by two experienced troupers who understand that attack and personality count for more in this kind of piece than conventional operatic skills: Julian Moyle as Jupiter and Emile Belcourt as Pluto gleefully involved themselves in the proceedings and relish the text with exemplary clarity. I also like Stuart Kale's Scottish John Styx and Johanna Peters as a Public Opinion person.

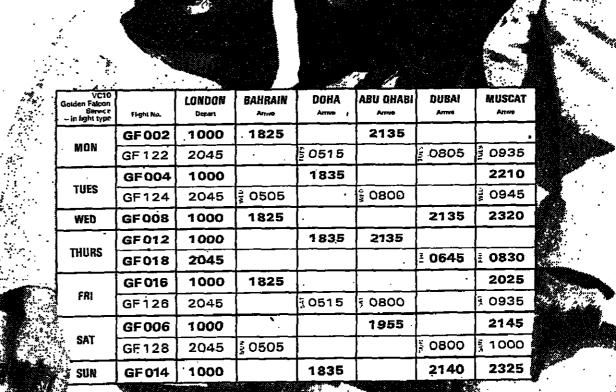
In the present, one of the most of the most of the stauture of the ing exactly the kind of enjoy that the kind of enjoy that the bundout the heady musically monds with these concerts. Beethoven's with these concerts. Beethoven's spring "Sonata at the begin that the former is not all dross with these concerts. Beethoven's principle of the light concerts are musical memories will undoubtment and interest one associates with these concerts. Beethoven's spring "Sonata at the begin hand the beady musical memories will undoubtment and interest one associates with these concerts. Beethoven's spring "Sonata at the begin that the former is not all dross with these concerts. Beethoven's spring "Sonata at the begin that the former is not all dross with these concerts. Beethoven's spring "Sonata at the begin hand the beady musical memoriacy with these concerts are with these concerts. Beethoven's spring "Sonata at the begin hand the beady musical memoriacy and the tend of virtuoso witting or seeing exhibitions phanales that the former is not all dross of the principle of virtuoso withing as a musical on a lonely with these concerts. Beethoven's spring "Sonata at the begin and the setur of rieg (No. 3) and Dellus (No. 2).

On the previ

If ever it should become violinist Wanda Wilkomirska, scheme. Equally illuminating are not yet projected strongly necessary to look at the Edin-heard as soloist two nights was the pairing of Wicnawski's enough either in dialogue or burgh Festival in the past rather earlier with the Gewandhaus Solonaise brilloute in A with this stricture are Rits Cullis an include a stricture are Rits Cullis and include a stricture and include a stricture are Rits Cullis and include a stricture and include a stricture are Rits Cullis and include a stricture and include a stricture are Rits Cullis and include a stricture and include a stricture are Rits Cullis and include a stricture and include a stricture are Rits Cullis and include a stricture and incl this stricture are Rita Cuilis, an valuable and enduring of the ing exactly the kind of enjoy that the former is not all dross



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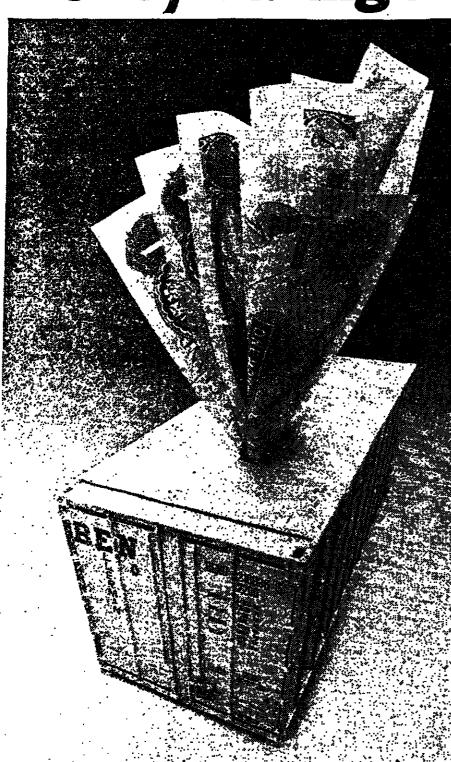
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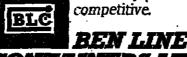
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7°. Debanture Stock 1986;91
NOTICE IS HEREBY GIVEN that the Transfer Bocks of the above Stock will be closed from the 13th to 17th Seotember. 1976. both dates inclusive. 1976. both dates labely Order of the Board. 25. Bedford Bower.

# NOTICES

# COMPANY

ORDINARY SHARES OF 25p
7° Redeemable Fredering Shares
NOTICE IS HERREY GIVEN that the
anster Books and Registers of Member
II be CLOSED from 17th September,
176 to 27th September, 1976, both
tes inclusive. By Order of the Board. C. H. Jones. Secretary

HEPWORTH CERAMIC HOLDINGS

NOTICE IS HERRBY GIVEN that the fransfer Books for the 10.4% Debenture Stock 1992.97 of the above-named Company will be closued from the 18th September to 20th September. 1975. Inclusive, for the preparation of interest

# READY MIXED CONCRETE LIMITED

74 % Bonds due 1987 FF 80,000,000 Notice is bereby given to the Bondholders that the Company has purchased a nominal amount of FF 2,400,000 to be redeemed on October 25, 1976.

An additional amount of FF 2400,000 has been purchased pursuant to "Optional redemption" of the terms and conditions of the Bonds.

Taking into account the optional FF 1.600,000 redeemed on October 25, 1975, the amount outstanding is FF 68,800,000.

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# to-day by

By John Wyles,

COURT action and negotiations with bankers will be launched

tors.
Cunard, a subsidiary of Trafalgar House Investments, reached a surprise agreement on Friday with Maritime Fruit which, if successful, will make the British company an important force in the transport of fruit and perish-able cargoes. The deal could have able cargoes. The deal could have and the first starts its flight development programme later vital bearing on Maritime's for- development programme tunes and may strengthen the Israeli-American company's attempts to find a way of going ahead with ships it has on order

ahead with ships it has on order at British yards.

Captain Mila Brener and Mr. Yaccov Meridor, Maritime's joint managing directors, yesterday issued a statement claiming that the Cunard agreement would alleviate considerably the company the company of the company to day that Lockheed of the U.S. at its Atlanta, Georgia, base, has now completed preliminary shaped body 24 inches in design work at economic studies for a new high-capacity, low-cost cargo aircraft which will be a derivative of the famous Herschelm of the company of the U.S. at its Atlanta, Georgia, base, has now completed preliminary shaped body 24 inches in design work at economic studies for a new high-capacity, low-cost cargo aircraft which will be a derivative of the famous Herschelm of the U.S. with balancing charges arising from sales under this contract, than under forced sales."

### Tax charges

The ships Cunard wants to buy are owned by Maritime subsidi-aries which will be liable for tax No repayments once the vessels are sold. Yesterday's statement appears to suggest that proceeds from the sales, together with "substantial non-utilised tax allowances in the group from new buildings, and some losses," will give the company some means of meeting tax charges.

There has been no indication of how much, if any, cash will find its way back to Maritime should the deal be concluded by Cunard's gaining control of the ships. It is understood that only about haif the \$112m. contract price will be provided in cash— and most of this will be ear-

TENDERS FOR GREATER LONDON BILLS

TENDERS FOR GREATER LONDON BILLS

TENDERS FOR GREATER London Council hereby will be fractived by motion that Tenders will be received a guide to the Fair Trading Act to the fair to the town of the tow mergers. restrictive trade practices and pyramid selling.

In his foreword Mr. Methyen says that, when he was at the sued and said at thouse a Broker, sued and said at thouse a Broker, sued and said at sent by post, on many traders concerning their sections of the says that the sued and said at sent by post, on many traders concerning their sections of the says that when he was at the white sued and said at sent by post, on many traders concerning their sections of the says that when he was at the wolume output in the U.K.

The Millitron equipment, a conventional woven backing which has cost Shaw £1.5m., in instead of foam.

The Millitron equipment a conventional woven backing which has cost Shaw £1.5m., in instead of foam.

The Millitron equipment a conventional woven backing which has cost Shaw £1.5m., in instead of foam.

# Court action Westland announces

# robot helicopters at Farnborough

BY MICHAEL DONNE FARNBOROUGH, Hants. Sept. 5.

with bankers will be launched to-day by the Cunard Steam Ship Company in its \$112m. (£622m.) bid to acquire 13 U.K.-registered refrigerated cargo ships nominally owned by Maritime Fruit Carriers.

All the ships are under the control of Maritime's creditors and one, the Orchidea, is due to be auctioned by Britain's Admiralty Marshal to-morrow. Averting this sale is one of Cunard's first priorities and the company will seek a court injunction to postpone it pending negotiations with leading creditors.

Cunard a subsidiary of Trafal.

THE FARNBOROUGH Internative is is much more than an "air the protocology for the device in the show glmmick" and they can be developments by a customary announce foresee a substantial market with the customary announce foresee a substantial market with the customary announce foresee a substantial market be device in the ments of new developments by a large number of manufacturers.

Most significant was Westland Helicopters' news that it is now day that the Boeing 74. Jumbo developing for the Ministry of pet equipped with the Rolls-flew for the first time last Frieduling for the company will seek a court injunction to postpone it pending negotiations with leading creditors.

Cunard a subsidiary of Trafal.

THE FARNBOROUGH Internation in it is much more than an "air the customary announce foresee a substantial market with the customary announce foresee a substantial market with the customary announce foresee a substantial market with the customary announce announce of the device in the gears ahead.

It was also disclosed here to-development for the Rolls-flew for the first time last Friends and the company will seek a court in junction to postpone it pending negotiations with leading creditors.

The two helicopters in the production of postpone it pending negotiations with leading creditors.

The two helicopters in the production of six aircraft due to begin in the production of six aircraft due to begin in the production of six aircraft due to begin in the production of the device in

wide range of future operations.

The two helicopters in the programme are called the Westland Wisp and Wideye. The roles has already been ordered by envisaged for these aircraft are reconnaissance, battle-field surveyance, target acquisition and control of gunnery. Possible dvil applications include traffic control, fire-fighting, and pipeline inspection.

A number of Wisps are being A number of Wisps are being installed in later versions of the Lockbeed TriStar airliner.

The flight test programme with the Rolls-powered Jumbo now

inspection.

A number of Wisps are being The flight test programme now built for the Ministry of Defence, the Rolls-powered Jumbo now about to start is expected to substantial orders for substantial orders for

### Successful

alleviate considerably the com-small piston engines.

pany's financial situation because Although tiny, the Wisp can Cules freighter.

It would "be better able to deal perform all the manoeuvres of Designated the L-100-50, it is a conventional believe to the convention to the conventional believe to the convention a conventional helicopter.

The second aircraft in the modium have generations programme, the Wideye, now at medium haul operations.

result in substantial orders for this engine-airframe combination

in the years ahead.

It was also announced here

to-day that Lockheed of the U.S.

programme, the Wideye, now at the design definition stage, is a larger and more sophisticated will provide lower costs per tonvehicle, which can carry out a wider variety of operational tasks.

No further technical defails are available, because the profice is wrapped in Ministry of the aircraft and expects to be Defence security. But officials of able to announce the first orders Westland Helicopters stress that Westland Helicopters stress that soon.

# Shaw adopts new carpet print process

BY RHYS DAVID, CHEMICALS CORRESPONDENT

and most of this will be earmarked for secondary mortgagees.

CBI produces

Guide to Fair

The direct A of

the Act covering the functions that the new Millitron printing five colour capability but will be and responsibilities of the directechnique will enable it to side building up to eight colours delays were reported the disp tor-general of fair trading and step present serious over next year; making it possible, hit harder than ever, the Consumer Protection Advi- capacity in tufted carpet printing according to James Hartley, the Passengers crowded sory Committee as well as the in the U.K. and give it sales in chairman, to reproduce designs departure lounge and extra se legal position on monopolies, the more expensive part of the and colours now only possible in ing had to be provided. Airly market still retained by woven woven Axminster-type carpets.

The means applied for.

5. Tenders must be made through a bonder to the freeding to the same of sold at the state of finished to the same of sold at the state of finished to the same of the same of

# **Brokers** to be told 'Talisman' strategy

By Michael Lafferty

THE STOCK Exchange char man. Mr. Nicholas Goodise will be writing to member his within the next month settle out the SE Council's strates for implementation of "Tall man," the new computeries settlement system due to con

into action in 1979.

The first two stages of the The dist two oracles or in scheme — the computering checking of deals between brokers and iobbers and a new computer of homeoir measurable. method of bargain accounts It has been estimated the Talisman, which will repli-the extensive paperwork is rolved in the present "ticket method of settling, will on member-firms about fam. year, but savings are expects to amount to £13m. amount

at 1975 prices. The capital ca of setting up the system is n t just under £16m.

Doubts have recently be expressed about the fin implications of the scheme which is designed for a big a active stock market, for S firms. The level of Stock E change business is now ver low and few broking firms n

believed to be making ad quate profits.

Plaus have already beg announced for an equalisatic fund to avoid Jobbers as brokers having to face high

charges at times of low but The Stock Exchange has a some time been holding what describes as "information, versations" with the proprietors of ARIEL, the comp terised share dealing syste spousored by the Accepting Houses which was set up a fe years ago in competition wil

the Stock Exchange, "The aim of these talks is explore whether there are log term benefits to the securiti industry generally in class co-operation between the ty markets," the Stock Exchan

## Spain flights up to ten hours late

Financial Times Reporter TRAVELLERS to Spain of inued to suffer long delays terday. Some passengers had wait up to 10 hours as a res of the Spanish air traffic cont

lers' dispute. Though the Spanish tour office in London said things we not expected to be as bad as l: week-end because there was le internal traffic in Spain,

### Heathrow, where the ten-he More Home News, Pages 8 and 32

Passengers crowded into 1

# FIVE ECONOMIC PROJECTIONS COMPARED

# Views differ on trade growth

BY PETER RIDDELL, ECONOMICS CORRESPONDENT

THE GOVERNMENT'S hopes inflation and the balance of and targets for the economy payment.

The Treasury has not produced a complete formal forested in the last few weeks both by a series of apparently puzzling economic indicators and, in the last 10 days, by publication of over half-a-dozen economic forecasts.

On many issues there is, of

1976/75

1977/76 1976/75

1977*|*76

1976/75

1977/76

1976/75 1977/76

1977

1976

1977

World Trade

Stockbuilding

Exports of goods

Personal consumption

Balance of payents

Gross domestic product

£m. (1970 prices)

current account

the Treasury and outside forecasts—notably on the broad
balance of the recovery now and
over the next year, with little
expansion in public spending or
private consumption and most
of the momentum coming from
exports, stockbuilding and in
1977 from private investment.

There are, however, important
particular components and on
particular components and on
projected rise in export volume
the prospects for unemployment, and in the estimated current
differences on the importance of account deficit.

The impact of North Sea oil. Both
range.

The impact of North Sea oil Both
National Institute and stockprovers Phillips and Drew are
ponents is shown, for example
a rise in real terms of between
threequarters of a point and
higher rate of expansion than growth assumptions is also
other projections, including, for reflected in the projected rates
of increase of GDP, and, for whose no change projections,
in example, accounts for some of
officially seen as disregarding
the impact of North Sea oil. Both
The unanimity on other cor
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a rise in real terms of between
threequarters of a point and
higher rate of expansion than growth assumptions is also
other projections, including, for reflected in the projected rates
of increase of GDP, and, for whose no change projections
officially seen as disregarding
the impact of North Sea oil. Both
The unanimity on other cor
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with the exception of officially seen as disregarding
the impact of North Sea oil.

The unanimity on other cor
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a rise in real terms of between
threequarters of a point and
higher rate of expansion than growth assumptions is also
other projections, including, for
reflected in the projected rates
with the exception of officially seen as disregarding
the impact of North Sea oil.

The unanimity on o

**ECONOMIC PROJECTIONS** 

Government

12/14/9

£7.5/1.7bn.

National

Institute

-£40m.

+£868m.

£1:94bn.

The above forecasts of percentage changes are constant 1970 prices comparing one year with another

The Government projections cover the range in the Treasury "scenarios" presented to the Neddy Council last month. While they were intended to be for illustrative purposes, the figure suggest, for at least the

£1,5bn.

+£25m

+£462m.

£1.98bn.

£1.8bn.

a-dozen economic forecasts.

Covered the expected rate of £2.23bn, before a substantial basis, but even anywing accourse, little difference between the expansion of exports and surplus of £1.3bn, in 1979, under the more optimistic end of the Treasury and outside fore. Gross Domestic Product.

Considerably on the broad of world trade the accompliance to North Sea oil. Both range.

Considerably on the broad of world trade the accompliance to National Institute and stock. The unanimity on other constants of the product of the product of the national Institute and stock.

jections will soon appear as if Treasury will shortly be legal required to publish its of London National Income projections Wood least twice a year, rather the just once at the time of the Business Phillips & Drew 11.1% 11.2% 9.6% 9% 3.0%

+£62m.

£1.9bn.

+£600m.

Budget . THE FINANCIAL TIMES, published daily ESS Sendays and holidays, U.S. sub-cripile \$167.00 tair freight \$131.00 tair mell 3 angum. Second class postage paid at a York, N.Y. **Hambros Limited** U.S. \$25,000,000 7%% Bonds, 1987

£1.36bm

Manufacturers and Traders Trust Coop-pany (Formerly First Empire Book-New York) hereby gives notice that the accordance with the terms of the above mentioned loan, the redemption of \$1,000.000 due on 1st October 1976 has been completed by purchase

next 18 months, the range of current Treasury thinking. The Government current account for projection was implied in the Budget. All the other forecasts have appeared within the last 10 days. Intended to be an up-to-date rather than a representative sample, that exclude the projections produced, for instance, by the Henley Centre and data STREAM. Manufacturers & Traders Trust Compa Principal Paying Agent September 1, 1976

وكالمن الأجهل

# Spanish Opposition alismo parties hold summit

THE PRESIDENTS of Zambia, Kissinger's Zurich talks with Mr. it appears its main purpose Mozambique, Tanzania, Botswana and Angola arrived here to-day for a summit to-morrow which the summit the angular president factions.

The president could make or break U.S. Secretary of State Henry Kissinger's plans for a new diplomatic initiative in Southern Africa.

The presidents began talks are recommendation from the Dar are commendation from the Dar are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area are recommendation from the Dar which is thought to be the area of Namibian and Rhodesian and R in a in a csent Government.

The meeting here is taking had planned to hold a summit at regular meetings between the place at the same time as Dr. about this time in any case, and other four Presidents. But it is place at the same time as Dr. about this time in any case, and other four Presidents. But it is not surprising that he has now been included in the group, with the centre, regional organisations.

Senor Suarez and at least two other members of his Cabinet is taking had planned to hold a summit at regular meetings between the place at the same time as Dr. about this time in any case, and other four Presidents. But it is not surprising that he has now been included in the group, which he most important Opposition Suarez and at least two other members of his Cabinet is taking had planned to hold a summit at regular meetings between the place at the same time as Dr. about this time in any case, and other four Presidents. But it is not surprising that he has now been included in the group, which he most important Opposition of the main nationalist movement, SWAPO, operate from bases in neighbour.

However, the Opposition parties until to-morrow. The meeting attended by remained open to negotiations are arrived and considered that these should

JOHANNESBURG, Sept. 5.

The played War.

# Nationalists in Dar talks

As the state of the proved to be failures.

However the Opposition parties in the proved to be failures.

However the Opposition parties in the proved to be failures.

However the Opposition parties in the proved to be failured by the proved to be failured.

However the Opposition parties in the proved to be failured by the proved by the

The meeting here is taking had planned to hold a summit at regular meetings between the

tween the different parties. they wished to negotiate directly said were the work of the banned tribal vigilante groups in the appeared that Dr. Kaunda was African. National Congress townships, reliable sources said leaving open the door to a CANCY.

وعنامن الأحم

Angolan President Agostinho The Presidents' meeting here Neto has attended one of the

# VW may pay off losses

By Adrian Dicks

BONN, Sept. 5. VOLKSWAGEN, reporting strongly improved results for the first half of 1976, held out to shareholders this week-end the possibility that, if present demand conditions are maintained, it may be possible to pay off the company's DM693m. (£154m.) of carried

forward losses.
The VW letter to share holders did not put a figure on its financial results for the first six months of this year. But it left the impression that the DM134m. profit achieved during the first three months was at least maintained. The letter also avoided

setting a date by which VW may now hope to pay off its heavy past losses. The new chairman, Herr Schmuecker, has limited himself only to saying that it was hoped to contribute towards paying off the carried forward osses this year. But he has not mentioned the possibilities of paying them off entirely. VW saw its turnover rise by

20 per cent to a new level of DM11.1bn., with booming domestic West German demand once again apparently the main contributor. Home urnover was up 29 per ceut and overseas turnover up 15 per cent, to a new level of

Hert Schmuecker also reported that VW had once again slightly increased its

# Terrorism laws will curb Ireland's Press

BY OUR OWN CORRESPONDENT

DUBLIN, Sept. 5.

IRISH newspapers will have papers, any more than any other hrough Parliament

duals would be subject to Sec- had cost hundreds of lives. Law Bill.

first confirmed in an interview have to look at this question given to the Washington Post again. Posts and Telegraph, Dr. Conor the most Republican of Dubin's Cruise O'Brien. Dr. O'Brien newspapers, Mr. Tim Pat Coogan, said he had a file of letters to claimed Dr. O'Brien had comthe editor published by the Irish piled a dossier of letters to the Press, and while the new editor in his paper and would measure would hardly be used to extend to the Press to jail the letter writers it might the same controls as apply to be used against papers which the Irish broadcasting service, published these letters.

Dr. O'Brien is expected to This is a reference to Section make a statement on this subject during the continuing prohibits RTE from broadcastdebate in the Dail this week.
In a radio interview to-day, more the aims of violent organi-

their activities curbed and section of society, and they editors could fare imprisonment could be affected by Section 3. under the Government's package Newspapers were going to have

of anti-terrorist laws now going to think a little more carefully This has become clear from than they had in the past about remarks made by two members what they were going to print. of the Government in the last Mr. Kelly said. He claimed the few days. They indicated that Government was dealing with a newspapers as well as indivi-murderous organisation which

ion 3 of the proposed Criminal These developments are already being seen as a threat to Press This would make it an freedom in opposition and news-offence, carrying up to 10 years' paper circles. The former Fianna imprisonment, to incite or invite Fail Minister for Justice, Mr. other persons to join an unlawful organisation or take part in, showed a Fascist and militaristic support or assist its activities.

Suggestions that the Section of the Government. Dr. O'Brien's would apply to the Press were remarks meant that they would for the following particular bave to look at this question

newspaper by the Minister for The editor of the Irish Press, Posts and Telegraph, Dr. Conor the most Republican of Dublin's

the Parliamentary Secretary to sations. It would seem that the the Prime Minister, Mr. John effects of the proposed Section 3 Kelly, said there was nothing on newspapers would be broadly secret or special about news- similar.

# Soames, Stoel mission to reassure Ankara

The alm of the BY DAVID CURRY

mmunitys External Analis its officer the fact that it ames go to Ankara to morrow foresees eventual Turkish entry

The mission is essentially to posals to improve the agreement in time for a meeting in July.

It assure the Turkish Government in time for a meeting in July.

But it proved so difficult for the meeting in the EEC States to reach agreement

in that relations with Ankara immand high priority in the Community with Mediter to control agreement with the concessions agreement with the decision to start negotiating position. That the Turks were given only four days before the scheduled meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the meeting to examine the EEC position. Faced with this take it or leave it situation, Turkey called off the examine the EEC position. Faced with this take it or leave it situation, Turkey ca View line near countries.

BRUSSELS, Sept. 5.

the markets IE DUTCH Foreign Minister series of Mediterranean accords the man legister Max van der Stoel and the and to some extent to restore the manualty's External Affairs its unique status a status

try to clear the way for the to the EEC.

w negotiations towards a In March when Turkish discontent came to a head, EEC

vamped agreement between content came to a head, EEC

Foreign Ministers promised pro-

Community with Mediter of the regime recently agreed rean countries.

To reassure the Turks, the original Council proposal was minumity has offered to re-rejected by the Turks as not soliate the agreement to bring worth having and have since nore into line with the recent been somewhat improved.

# Greek economy 'better'

BY OUR OWN CORRESPONDENT

LSTERING Greece's defeace cent in 1975), mainly as a result ability and the country's of a 7.5 per cent, increase in edy integration in the industrial production. And it is nown Market are the two estimated that fixed capital investments at constant prices will increase by eight per cent. (as against 1.7 per cent. in 1975), infation will be contained at about 11 per cent. and the premier said that despite by defence expenditure which tripled in the past two years, rnational stagnation and its iral repercussions in Greece, Greece economy was doing or than in most West opean countries.

However, Greece's defeace with neighbouring Turkey over the Aegean and Cyprus and the political and economic benefits to be reaped from full membership of the EEC necessitated exceed five per cent. sacrifices and the exercise of 976 (compared with 3.3 per self-restraint, the Premier said.

# Soviets trim Czech oil

PRAGUE, Sept. 5.

TET crude oil deliveries to hoslovakia in the next five a will fall short of original nates, a senior official said hy.

The statement was the first high-level indication that Moscow may be cutting back on oil exports to its East European allies. Although Soviet oil production has been increasing, some supplies have been diverted to Western countries. Soviet leader Leonid Brezbnev facts a problem of (Czecho-akia's) external relations in field of fuel and power."

T. Kempny's speech at a crif day rally, as reported by official Cateka news agency, no hint of the extent of the et cutbacks. Nor was any on given for the decision to the original plans.

St year, the Government disciplification of the control of the cont

ing this year, enough to fered either a stroke or a heart is. Under a contract signed Agencies

# 'eking row after 'quake

PEKING, September 5. )NSTERS, demons and the earthquake aftermath, but it did

of society" surfaced not specify what the losses were, are relief efforts after the stating Tangshan earthie, the People's Daily news it said to-day.

The relief effort following the erathquake, which struck on July struck to Jul

Premier Teng Hsiao-Ping the paper said, caused "losses" in the Reuter

purged and villified former to launch attacks on Socialism,



# World power

Rolls-Royce engines are the power behind aircraft of 219 airlines, 80 armed forces and 570 corporate operators.

After-sales support includes subsidiary companies on four continents, 320 service representatives and 75 repair bases operated or supported by Rolls-Royce.

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# \*\*RESEARCH\*\* \*\*COMPUTERS\*\* \*\*Alternative symbols on film scale for characters on microflate by an extractly precise by an extractive precision of the control of the proposal of the control of the proposal The Technical Page

the laser beam transfers solld dies between one sheet of a sensing these MOS memory of the stress of the sheet of a sensing these MOS memory of the sheet of a sensing the sheet of the sheet of a sensing the sheet of the sheet

# • TEXTILES

award winning

Cheshire, SKS 5BB (061485 MATERIALS. 8438), has introduced a combined incinerator/heat recuperaused for a particular task. It is a development that can be fitted

r oil burner. Using external air, the exhaust ment with Heim.

# tor which it is guaranteed, will Extremes of save at least 50 per cent of fael

is fed through this burner zone. The temperature range exwith a constant 18 per cent tends from -65 degrees F (-54 oxygen level in stable condidegrees C) to +325 degrees F tions. The temperature in the (+163 degrees C) and the co-burner varies from 600 to 1,000 efficient of friction is about .06

# a development that can be fitted to existing stenter frames and not only does it offer substantial savings in fuel, but the final exhaust from the system is non-polluting and in no way noxious. The concept is simple, A BEARING material, Unifion although the technology is Type "RR." developed for use highly sophisticated. Exhaust at extreme temperatures, by the from the chamber of a heat. Heim division of Incom Interference in given the particles, monomarketed in Britain by Rose mers and vaporised lubricants of Bearings, of Saxilby, Lincoln, a

mers and vaporised lubricants of Bearings, of Saxilby, Lincoln, a various kinds. All can be Baker Perkins company, burned. As this exhaust is extracted from the chamber it is porated in spherical bearings looped through ducting to a gas and rod ends manufactured by or oll hurner.

### CONTRACTS AND TENDERS

FEDERAL REPUBLIC OF NIGERIA NATIONAL ELECTRIC POWER AUTHORITY PREQUALIFICATION OF TENDERERS

CONTRACT NO. CS006 GENERAL WORKS FOR SHIRORO HYDROELECTRIC PROJECT

NIGER STATE, NIGERIA hiroro Hydroelectric Project is located in Niger State, Nigeria, approximately in southwest of the city of Kaduna. It is situated at Shiroro Gorge on the River near its confuence with the Dinya River. The National Electric Authority (NEPA) plans to invite tenders from prequalified tenderes in a of 1977 for construction of the project scenaria works, and to receive meers in July of 1977, and award a contract in November of 1977. Common of the works is scheduled for July of 1982.

Port of the contract for the General Works includes the following principal 95:

denstruction camp, storage warehouse and area, offices, trist aid stations, of similar temporary works.

9 km of service roads.

9 km of service roads.

8 corrects sold and of 700 metres crest length and 115 metres sight above the river bed, and two reservoir rim dikes.

8 corrects sold way of 9800 cms capacity controlled with four radial gates an above-trained indoor-type powerhouse with a generating capacity of 00 MW consisting of four units.

9 of MW consisting of four units.

9 of ower intake structure and four 6 3-metre diameter concrete encased pensions averaging 340 metres in length.

9 an administration and control building.

9 Approximately 6.7 km of railroad reflocation.

9 urbines and governors, generators and excessories, and power transformers with a lumines and governors, generators and excessories.

9 lumined and installed under other contracts.

10 NEPA will furnish cranes into holists attell pensionskip, gates and gate pulles, and trahracks for installation into the General Works combract. A command of the pensionskip of th ing construction.

In order to premult's as an acceptable tenderer, interested contractors most complete and submit prequalification forms. Required pregualitization forms may be obtained from:

be obtained from:
Chas. T. Main International. Inc.
Southeast Tower
Profestial Center
Boston, Massachusetts, U.S.A., 02199
Attention Mr. N. P. Triano
Project Manager
The forms must be completed and returned to Mr. Triano's attention at the above address no later than December 15, 1976

NATIONAL ELECTRIC

POWER AUTHORITY

(NEPA)

PREQUALIFICATION FOR

TENDERERS FOR

CONTRACT No. MS 001

FURNISHING, DELIVERING

AND INSTALLING HYDRAULIC TURBINES

AND GOVERNORS FOR

SHIRORO HYDROELECTRIC

PROIECT

NIGER STATE, NIGERIA

The Shiroro Hydroelectric Project will consist of a concrete-faced rockfill dam with a height of 115 metres from the river bed and a cress length of 700 metres, including spillway; an above ground indoor-type powerhouse at the dam site with a generating capacity of 600 MW using four 155 MV/Francis turbines rated at 97 metres mean net head and a shaft speed of

mean net near and a shall speed of project is located in Niger State, approximately 90 km, south-west of the City of Kadona. It is situated at Shiroro Gorge on the Kadona River near its confluence with the Dinya River.

River.

The National Electric Power Authority plant to invito tanders in November of 1976 from proqualified tenderers for the furnishing, dolivering and installing of hydraulic turbines and governors for the Shiroro Power Project: followed with contract award in June of 1977, with initial operation of the first unit scheduled for July 1. 1981 and the fourth unit by March 1. 1982.

In order to prequalify as an acceptable.

1982.
In order to prequalify as an acceptable tenderer, interested contractors must complete and submit prequalification forms. Required prequalification forms may be obtained from:

Chas. T. Main International. Inc., 134-136 Broad Street, P.M.B. 12030.

Lazos, Nigeria. Agtention: Mr. E. Ringle, Project Co-ordinator.

Chas. T. Main International, Inc., Southeast Tower.
Prudential Center.

Prodential Center.

Boston, Massachusers, U.S.A. 02199.
Astension; Mr. N. P. Triano.
Project Manager.

The forms must be completed and resurned to Mr. Triano's attention at the above Boston address no later than Octaber 1, 1976.

NATIONAL ELECTRIC POWER AUTHORITY (NEPA)

PREQUALIFICATION OF TENDERERS FOR CONTRACT No. ES 001

FURNISHING, DELIVERING AND INSTALLING GENERATORS AND ACCESSORY EQUIPMENT FOR SHIRORO HYDROELECTRIC PROIECT NIGER STATE, NIGERIA

The Shiroro Hydroelectric Project will consist of a concrete-faced rockfill dam with a height of 115 metres from the river bed and a crest length of 700 metres, including spillway; an above ground indoor-trye powerhouse at the dam size with a generating capacity of 600 MW consisting of four units: an administration and control building: and a switchyard. and a switchyard.

The project is located in Niger State, approximately 90 km, south-west of the City of Kadina. It is situated at Shiroro Gorge on the Kadina River near its confluence with the Dinya River.

The National Electric Power Authority plans to invite tenders in November of 1976 from prequalified tenderers for the furnishing, delivering and installing four generators and antesones for the Shirora Power Project followed with contract award in July of 1977, with initial operation of the first unit scheduled for July 1, 1981 and the fourth unit required by March 1, 1982.

March 1, 1982.

The generators will be vertical shaft type, hydraulit-driven with a shaft mounted rotating eveiter and rotating amplifier type voltage regulator system. The generators will be rated 150,000 kW, 085 power factor. 16,000 volta, 50 herez and 150 rpm. The contract will include generator main leads constant of 8,000 ampere self-cooled isolated phase bus.

In order to Prequaitly as an acceptable tenderer, interested contractors must complete and submet prequalification forms. Required prequalification forms may be obtained from:

Chas. T. Main International. Inc., 134-136 Broad Street.
P.M.B. 12330, Lagos, Nigeria Attention: Mr. E. Ringle, Project Co-ordinator. Chas. T. Main International, Inc., Southeast Tower.
P-udennal Center.
Boston, Marsachisetti, U.S.A. 92199.
Attention: Mr. N. P. Triano,
Project Manager.

The forms must be completed and returned to Mr. Triano's attention at the above Boston address no later than October 1, 1976

(c) One Powerhouse Crane Partial Tenders will not be accepted. The turbines will be single runner vertical propeller type capable

(b) Four Generators

(a) Four Turbines and Governors

of delivering not less than 55,500 metric horsepower under a nethead of 11.75 metres. Generators will have a continuous racing of 45,600 KVA at the terminals at a power factor of 90 per cent and will be designed

REPUBLIC OF GHANA

**YOLTA RIVER AUTHORITY** 

KPONG HYDROELECTRIC PROJECT

TURBINES. GENERATORS AND POWERHOUSE

CRANE CONTRACT NO. K-4

INVITATION TO TENDER

the Kpong Hydroelectric Project on the Volta River in Ghana:

Volta River Authority invites tenders from suitably qualified and experienced firms or groups of firms for the manufacture. supply and erection complete of all of the following items for

for a speed of 62.5 rpm. The Powerhouse Bridge Crane will have a span of approximately 27 metres and lifting capacity of approximately 275 tonnes. Tenders for an alternative Gantry Crane of equal capacity will also be

The Government of Ghana and the VRA have approached the International Bank for Reconstruction and Development, the Commission of European Communities and the European Investment Bank for assistance in the financing of the off-shore component of

the contract described hereinabove. This assistance is currently

under consideration by the above-mentioned financing agencies. Tendering will be restricted to companies and joint ventures with registered offices in countries which are members of the International Bank for Reconstruction and Development, and Switzerland. The latest date on which tenders will be received is December 7, 1976. Requests for Tender Documents must be accompanied by a bank draft made out in favour of Acres International Limited in the amount of SUS100 per complete set of documents. In addition, data describing similar equipment supplied to other owners must also be submitted with the resuest to the following:

The Chief Executive Kpong Hydroelectric Project Volta River Authority P.O. Box M77 Accra. Ghana West Africa Cable: Volta Accra (b) One copy to: Acres International Limited Kpong Hydroelectric Project 5259 Dorchester Road Niagara Falls. Ontario Canada, L2E 6WI

Telex 061-5107

Cable Acrescan Niagara Falis The Tender Documents will be dispatched from Acres International Limited to the applicants, postage paid, by the quickest means

# **COMPANY NOTICES**



BEARER DEPOSITARY RECEIPTS Following the DIVIDEND DECLARATION by the Company on 8 July 1976, NOTICE is not given that the following DISTRIBUTION will become payable to Authorised Depositaries on or after 13 September 1976 ogainst presentation the Depositary (as below) of Chim Forms (ordenable from the Depositary) listing Bearer Depositary Receipts. Gross Distribution oer Unit 4.00 cents Less 15% U.S. Withholding Tax 0.60 cents

Converted at \$1.78 = 20.019101 per Unit DEPOSITARY National Westminster Bank Limited. STOCK OFFICE SERVICES. (2nd Floor), 41 LOTHBURY.

LONDON, E.C.S.

3 September, 1976

3 40 cents non Unit

NATIONAL ELECTRIC POWER AUTHORITY (NEPA)

PREQUALIFICATION OF TENDERERS FOR CONTRACT No. ES 002

FURNISHING, DELIYERING AND INSTALLING POWER TRANSFORMERS FOR SHIRORO HYDROELECTRIC PROJECT

NIGER STATE, NIGERIA The Shiroro Hydroelectric Project will consist of a concrete-faced rockfill dam with a height of 115 metres from the river bed and a crest length of 700 metres, including spillway; an above ground indoor-type powerhouse at the dam site with a generating capacity of 600 MW consisting of four units:

aim site with a generating capacity of 600 MW consisting of four units: an administration and control building; and a switchyard.

150 rpm: an administration and control building; and a switchyard. The project is located in Niger State. approximately 90 km. south-west of the City of Kaduna. It is situated at Shiroro Gorge on the Kaduna River near its confluence with the Dinya River. The National Electric Power Authority plans to invite tenders in February of 1977 from proqual-fied tenderers for the furnishing, delivering and installing five main power transformers and two transmission tie transformers and two transmission tie transformers and two transmission tie transformers for the Shiroro Power Project: followed with contract award in October of 1977, with delivery of the first unit atheduled for November 1, 1980. The transformers will be 50 Hertz of the three-phase, oil immersed type with constrain pressure conservator type of oil preservation system. The main with constant pressure conservator type of oil preservation system. The main power transformers will be rated 200,000 kVA, forced-oil, forced-water cooled, 65°C rise, 330 kV wys connected solidly grounded neutral high voltage winding. The transmission tie transformers will be rated 54,000 172,000/49,000 kVA self-cooled, forced-air-cooled, forced-oil-forced-air-cooled, 65°C rise, three winding, 330 kV and 132 kV we connected solidly grounded and 11 kV delta connected terdary winding. In order to prequalify as an acceptable tenderer, intorested contractors must complete and submit prequalification forms. Required prequalification forms may be obtained from:

Chas, T. Main International, Inc.,

Chas. T. Main International, Inc., 134-136 Second Street. P.M.B. 12030. Attention: Mr. E. Pingle.
Project Co-ordinator. Chas. T. Main International, Inc.,

Couchest Tower.
Prodential Center.
Boston, Massachusetts, U.S.A. 02199
Attention; Mr. N. P. Triano,
Project Manager. The forms must be completed and returned to Mr. Triano's attention at the above Boston address no later than November 15, 1976.

### **LEGAL NOTICES**

In the HULB FOURT OF JUSTICE Chancery Division Companies Court In the Milker of CAWLEY BROSS (ROUND). WORK I HAULAGE LIMITED and in the Matter of The Companies Art 1918. Notifice is HAULAGE LIMITED and in the Matter of The Companies Art 1918. Notifice is HEPERY GIVEN, that a Federoit for the Window-Op of the above-famed Company to the High Court of Justice (List on the 28th day of Magnet 1976, presented to the said Court by the Court 1850/NERS OF CUSTOMS AND ENGISE of King's Beam House 28-41, That Line, London ECGI THE and that the said Petition is directed to be heard the said Petition is directed to be heard the Said Petition is directed to be heard Courts of Justice, Strand, London WCPA, 21th, on the 1-th day of October 1976, and any credute or contributery of the said Company desireus to support of oppose the making of an Order on the said Petition may appear at the time of heartna in person or by his Counsel for fluid purpose; and a copy of the Petition will be formished by the understand to any or thor or contributory of the Said Company requiring such copy on purment of the regulated charge for the KRIKORIAN.

on partners of the required charge for partners of the regulated charge for two states.

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ESTADO DO PARANA Secretaria de Estado das Financas ompanhia Paranzense de Energia Eletrica CIA. AUXILIAR DE EMPRESAS ELETRICAS BRASILEIRAS

CAEEB INVITATION TO PROSPECTIVE SUPPLIERS OF ELECTRIC AND ELECTRONIC EQUIPMENT AND MATERIALS

The COMPANHIA PARAMAENSE DE ENERGIA ELETRICA-COFEL has received a loan from the international Bank for Reconstruction and Development in various currencies equivalent to U.S. Dollars 52,000,000 toward the cost of OPEL distribution enterca. to U.S. Dollars \$2,000,000 toward the cost of UPEL distribution project, and intends to apply the proceeds of the loan to eligible payments under the contracts for which this invitation to bid is issued: Payment by the international Bank for Reconstruction and Development will be made only at the request of the Companhia Paranaense de Energia Eléctica-COPEL and upon approval by the International Bank for Reconstruction and Development in accordance with the terms and conditions of the loan agreement and will be subject in all respects to the terms and conditions of the loan agreement. Except as the Bank may specifically otherwise agree, no party other than the Companhia Paranaense de Energia Elétrica-COPEL shall derive any rights from the loan agreement or have any claim to loan agreement or have any claim to loan proceeds. COPEL have contracted the services of COMPANHIA AUXILIAR DE EMPRESAS ELÉTRICAS BRASILEIRAS (CAEEB) to co-ordinate the purchase of the materials listed hereinbelow: The programme will cover the expansion of the subtransmission and distribution but is not limited to, the purchase of the following materials and equipment:

—Auminium conductors with and without steel reinforcement, 2—Copper conductors.

I—Aluminium conductors with and without steel reinforcement.

2—Copper conductors.

3—Accessories and line hardware.

4—Suspension, pin and pedestal insulators.

5—Power fuse switches.

6—Disconnect switches, hand driven and motor driven.

7—Load break switches.

8—Capacitors.

9—Capacitor oil switches.

10—Station type voltage regulators.

11—Distribution type voltage regulators.

12—Station.

I Distribution type voltage re lators.

I2—Potential transformers and cure transformers.

I3—Galvanised Steel Cable © 9
SM and © 8 mm HS.

I4—Automatic stectionalisers.

I5—Recopers.

I6—Luminaries and accessories.

I7—Power transformers.

I8—Distribution transformers.

I9—Creuit breakers.

20—Metalelad switchgear.

21—Relays. 21-Relays.
22-Lightning arresters and discharge

counters. 23—Test board. -Watthour maters,
-Control and protection swetch-boards.
-Battery/battery charger sec. 26. Battery/battery charger set.
27. Grounding systems.
28. Laboratory equipment.
29. Hot line maintenance equipment.
31. Topography equipment.
31. Topography equipment.
32. Steel structure.
33. 15 kV insulated conductors.
34. 4600 V insulated conductors.
35. Test and laboratory equipment utilised on electric discribited system.

utilised on electric distribution system.

36—Mobile substation, lovisations to Bid will be issued by CAEEB and are open to any manufacturer or supplier located in Switzer-land or any member country of the International Bank for Recommunition and Development—IBRD. Suppliers or manufacturers located in Switzerland or in any member country of the International Bank for Recommunication and Development—IBRD who wish to be included in a mailing list in order to raceive the aforementioned invitations to Bid are requested to express their interest in a letter addressed to:

CAAEB.

captus diet interest in a letter addressed to:

CAAEB.
Attention Coordenador de Compress.
Avenida Rie Branco. 135-13° andar.
Post Office Box 883,
ZC-00 Rio de Jameiro 20.000, Brzsil.
The letters from prospective suppliers and manufacturers should include the material and equipment which they propose to bid.
These letters will be received up to and including November 1, 1976. and all letters will be nestuded in the mailing lest of the bids.
After the bid has been evaluated.
COPEL shall ascertain whether the lowest bidder has the capability and financial resources effectively to carry out the supply. If the bidder does not meet this test, his hid shall be rejected.

of microfilm record direct from the central computer retairer than equipment for quality assurance and Danish (DEMKO) testing my scaling. There is also a to develop, another duplicate can be prepared in the exposure section two is a compressive from the pressure point of the measuring instrument. A modification to the market by Loba (Industrial) of the measuring instrument and suppliers, listing them on any proceedings of a seminar held for posting and annotating in proceedings of a seminar held for which existing COM opera entry. Containing 130 pages, it for which existing COM opera entry. Containing 130 pages, it for which existing COM opera entry. Containing 130 pages, it for which existing COM opera entry. Containing 130 pages, it for the future for switching composition such as recombination electrode in the expansive of the future for switching composing and uses absulting them on a most suppliers to make vertical.

In tests of the technique, speakers' papers with illustrate containing 130 pages, it from the pressure plastic protected for long life. OP-10 can handle the complete sample cup, treversal) duplicates, too. Double for which existing COM opera entry. Containing 130 pages, it form and case with accessories the thermal-active film properly, and of the future for switching composition.

In tests of the technique, speakers' papers with illustrate leaves of the technique, speakers' papers with illustrate elements from the pressure plastic protected for long life. OP-10 can handle the complete suppliers and the company at fische duplicates, too. Double down and addition to the standard to the terms and subble and other drawing facility the Perturbative symbol.

The laser process is a one-step dry method and it could be used for make vertically to make a standard to the treatment of the measuring instrument. A M OP-10 can handle the combination electrode as the future for switching composition co-ordinates. Syn

# deg. C., depending upon condi- at pressures over 15,000 psi at tions. After several passes room temperature.

PLANT & MACHINERY

SALES

Telephone Description Price 1974 Ten Stand roll forming line by Hunter-Douglas. Virtually unused Capacity 200 mm × 2 mm M.S. strip complete with automatic 021-556 0904 cut-to-langth equipment.

2 Stand Rolling Mill for P.O.A. Telex 336414 flactening wire and rolling narrow scrip. Complete with 021-556 0904 edging rolls and recoiler. P.O.A. Telex 336414 es Milis 1) 12" x 12" 125 HP Farmer. Norton two high.
2) 24" x 36" x 300 HP Robertson ---two high. 3) 6" x 12" 14"—180 HP 021-556 0904 Stanart Mann four high. Modern Used Rolling Mills, wire rod and tube drawing plant-P.O.A. Telex 336414 roll forming machines—sileting—flattening and cut-to-length lines—cold saws—presses—guillotines, etc.

1970 Herdieckerhoff 100 KW 021-556 0904 Telex: 336414 P.O.A. double vacuum annealing plant useful charge area 625 mm dia × 2000 mm loading helgito-021-556 0904 output 600 lb per 24 hours 1971 Automated 25ft Drawbench Telex 336414 P.O.A. with pushpointer by Wellman-effective pull 10 tons at 100 fpm and 20 tons at 021-556 0904 50 fpm. Virtually unused. P.O.A. Telex 336414 by Noble & Lund
with batch control for cutting
non-ferrous bar. Max. capacity 021-556 0904 round and square; P.O.A. Telex 336414 1971 Fully Automatic High Precision Circular Saw by Rhobl-with batch control. Max. capacity 60 mm bar-70 mm profiles and 021-556 0904 tube.

1970 cut-to-length line,
max capacity 1000 mm x 2 mm
x 7 tonne coil, fully overhauled
and in excellent condition. P.O.A. Telex 336414 021-556 0904; POA Telex 336414 Caterpillar 14E Motor Grader, complete with new tyres. Caterpillar 966C. Wheel Loader, £25,500 Telex 51187 with 31 cu. yd. bucket and new 094-34 4531 tyres.
Sigmund High Pressure Pumps type HO-HL5 c/w Baseplates, working instructions and test £25,500 Telex 51187 £975.00 061-483 6101/ 2/3/4 Telex 666343 Akron Batch Off Machine

WANTED

Modern Used Rolling Mills, wire rod and tube drawing plant-roll forming machines—slittin flattening and cut-to-length fines—cold saws—presses—

---

guillotines, etc. PLANT AND MACHINERY SALES/WANTED APPEARS EVERY MONDAY. FOR FURTHER INFORMATION RING MR. FRANCIS PHILLIPS. 01-248 8000, Exc. 456.

021-556 0904

هكذا منالاصل



11-1 HIM

# Building and Civil Engineering

# Good start for George Wimpey

another worth £1.8m. awarded deflection for each 20-foot pipe

tral services depot at Park Farm, Simplicity and speed of Minworth. Sutton Coldfield, assembly of the Victaulic joints. West Midlands. — installed at a fraction of the Included in the 9,625 square speed of welding — were also metres development is a work-important factors. The was negotiated without the window speed of welding and stores building of Victaulic at POB 13, 46 shop and stores building of 7,000 square metres at ground Wilbury Way, Hitchin, Herts, level and 630 square metres at first floor, constructed in steel frame with metal cladding. Other structures include a 215 square metres two-storey boiler house and incinerator, an 80 square metres single-storey substation and compressor building.

square metres single-storey substation and compressor building,
a gate house and a two-storey
office block/link section.

This contract, for which the THE FIRST contracts to be
architects are Peter Hing and announced by Cubitts since it
Jones, is due for completion in became path the Tarmac Group

June 1979

June, 1978.

The Nottingham job, at Clifton
Lane is for 220 dwellings and is the second phase of the project now under way there.

The original contract is a £976,371 order for updating lawarded to Wimpey in Septemher last year and the two together will bring the total number of homes to 600.

# Allows for curves in pipework

mechanical pipe joints made by the Victaulic Company (part of the British Steel Corporation's Keeping the Tubes Division), of Hitchin, Herts, is the main reason for tides of their selection for use on long tides at work required for installation ATERIALS around the big new cresent-shaped Transfesa international Day freight terminal at Paddock THE AN

were required in the sprinkler tions in river level due to tides system designed and installed by or fluvial discharge and were Ellis Fire Protection of London, badly affected by the 1953 floods.

# Dravo

very best in industrial and commercial heating equipment to suit every specification. Covrad Limited,

Sir Henry Parkes Road. Canley, Coventry CV5 6BN. Fel. 0203-75544 Telex 31549







A £2im. contract awarded by Each of the 4 inch mechanical the Tame Division of the Severn compression joints afforded 1.35. Trent Water Authority and angularity allowing for 6.6 inch another worth 11.5m. awaited denection for each serious pape by Nottingham Corporation, length. Thus by using long, bringing the total to well over straight runs of pipe together film, makes a good September with the Viciaulic joints in the start for George Wimpey.

The larger contract is a cen-was negotiated without difficulty.

The larger contract is a cen-was negotiated without difficulty.

Ane, is for 220 dwellings and in the second phase of the prosect now under way there.

The original contract was kitchens and bathrooms on 432 warded to Wimpey in September last year and the two Farm Estate, Huyton, for Knows-

Farm Estate, Huyton, for Knows-ley MBC.

At Eccleston, Lancs., 180 dwell-ings are to be modernised at a cost of \$187,324 for St. Helens' Borough Council while Cubitts is also to build a \$112,000 solvent recovery plant for Crown Decorative Products at Darwen,

This work will involve constructing a large retaining wall, a surface drainage system, tank-installation and improvements to

THE ANGLIAN Water Authority Wood, Kent.

A bonded transit shed with its nown freight link, the 300,000 Palmer and Tritton to carry out lisquare feet Transfess building a study of means of excluding is a quarter of a mile long and surge tides from the Great 220 feet wide, being built in a Yarmouth and Yare Basin areas. Curve of 240 metres radius to a provide maximum floor area in lying land adjacent to the main the available acreage. A total channels of the rivers Bure, of some 470 Victaulic joints, Yare and Waveney and their were required in the sprinkler tipus in river level due to tides.

THE ANGLIAN Water Authority contract was placed with Conde contract was placed. The contract was placed with Conde contract was placed. The contract was placed with Conde contract was placed with Conde contract was placed. The contract was placed with Conde contract

addy affected by the 1953 floods. oven £300,000 for construction in the study many possible sites in Saudi Arabia are to be obtained in the study of exclude tides permanently, will be studied and the possible benefits to water resources which might arise assessed. Effects on navigation, agriculture, transport, tourism and the ecology of the area will be examined.

# Homes to be modernised

MIDDLESBROUGH Borough Council has awarded a £500,000 contract to the Fairclough Group for modernising 94 houses in Marton Grove North. The contract calls for general Freres Anstlat. improvements to the two-storey traditional brick houses and their

late-roofed outbuildings. Work has been started by the Guide to Sir Lindsay Parkinson North East Building Division and will take 50 weeks to complete.

### roofing £4m. Conder roofing materials available to the U.K. building industry is contained in Roofing 76/7, the latest edition in the Architects' and expansion in Scotland

fim. factory expansion and innovations, general interest charmisation scheme has just articles and data on roofing modernisation scheme has just been announced by Conder Scotland at Cumbernauld New Town, land at Cumbernauld New Town, second part is a detailed analysis to accommodate the increasing of manufacturers and proprietary volume of steel framed building ranges available in the U.K. A section on roofing contractors is export markets.

Latest of the contracts are worth over £2m. These include a contract valued at over £1m. to build the steelwork for the Street Edgaphyldes Kent

to build the steelwork for the Street, Edenbridge, Kept.

# for Drake & Scull

THREE orders worth over £21m. for installations in dömestic ing.

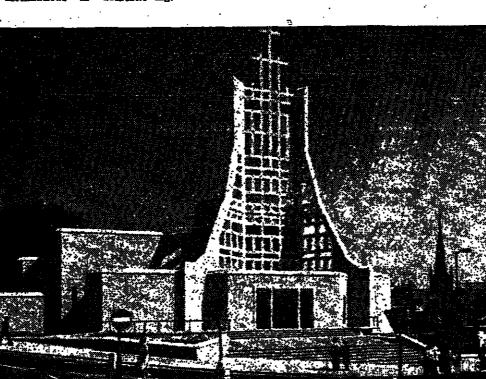
and is valued at over £1m. The bank District Council.

work consists of modernising warm water and witchens and bathrooms together valued at over £1m. covers the company, worth £316,000, is for with upgrading plumbing and plumbing installastage 6 of the Enfeld main foul suitable for most applications in 669 houses forming sewer for the London Borough of three buttons to operate supplies of soap, warm water and hot air drying.

Suitable for most applications in office blocks, hotels, research beating and plumbing installastic sever for the London Borough of tarrants and conference centres.

grading of houses at Netherton worth nearly £700,000 for Clyde-

trai heating, roof work, wall phase 3 of the Penliee project, treatments, joinery and paint Main contractor for this work is



On the top of Tor Hill, Torquay, Deven, this church which opened this weekend, was built at a cost of £1m. by Currall, Lewis and Martin. Its principal visual element is the 30 metres high "sky screen." the lower portion of which is glazed in thick

Sullom Voe Terminal power station and will consist of the main building complex, switch gear building, water treatment black and the pipe track.

This involves the supply and

erection of over 2,000 tonnes of steel with work beginning on site at the end of the year. The

contract was placed with Conder Scotland by Foster Wheeler acting on behalf of BP.

The buildings are to provide

accommodation for expatriate

personnel working on the erec

tion of office blocks and other

civil engineering works in the Dhahran area, and accommoda-

tion for site labour and staff,

building grain siles and a flour

For the project in the Dhahran area, Hallam's customer is

WLL a member of the Kettaneh

group of companies, and for the

grain silos and mill project, Hallam will be supplying an international consortium consist ing of Dyckerhoff and Widman AG of Munich, and Kettaneh

UP-TO-DATE information on

edition in the Assault Specifiers' Guide series. 320-page illustrated this is the fifth edition

—is divided into several sections

The first covers recent technica

theory, design and practice; the second part is a detailed analysis

mill, at Jeddah and Dammam.

Nottingham.

architects, Edward Narracott, Tanner and Andre, chose concrete as the main building material, blocks being supplied by Forticrete and ready-mixed concrete by Pencrete. Structural engineers were

multi-coloured Dartington glass panels. The W. S. Atkins and Partners.

# Scott Hale gets jobs

dwellings have been received by Another job is upgrading the the construction of 52 mediumDrake and Scull (Scotland). The electrical installations of 2,579 rise flats and maisonettes at "the ultimate in hand washing"
largest, from Glasgow District houses at North Drumry and Hildrop Crescent, N.1. for the "the ultimate in hand washing"
Council, involves the total up-Whitecrook under a contract London Borough of Islington, which features a separate papel

Borough of Harrow an £83,000 Melville, Dundas and Whitson. surface water sewer in Pinner is scheduled for completion in 20

> cial area off Pitsea High Street and includes piled retaining the walls and diversion of services. and

# Speeds the drying out

PORTABLE Wysepower dehumidifier units are reported to
have cut traditional drying times
by 50 per cent. on the Low Hill
Estate in Wolverhampton where
600 of the 4,000 municipallyowned dwellings have been
modernised by Tarmac Construcmodernised by Tarmac Construc-

Under the extensive moder-nusation scheme each of the 50nisation scheme each of the 50year old houses had a new bathOVER 1.000 finely ribbed conactivated carbon, is opening a
room and lavatory built at first crete panels, the heaviest of new £10m, plant at Felny in
floor level, an enlarged kitchen, which weighs 4½ tons are being Belgium to make the material
renewed window frames, rewirfabricated by Trent Concrete of Chemviron is on 01-977 5404

each building was com-

The dry air is then rapidly cast against a rubber lined per cent. heated and returned into the mould to produce a high quality. The co

the fabric of the house and making it ready for re-occupation in half the normal time whatever the prevailing weather condi-

# Worth £1½m. Push-button LARGEST OF several contracts totalling over £1½m. awarded to hand wash Scott Hale (Contractors) is for medium.

Work or the £888,000 contract of three buttons to operate

Sewer for the London Borough of taurants and conference centres, Several Enfield, while for the London it can if necessary be fitted with Several a sterilising trap for use in medical, laboratory or food processing environments.

Work is also to begin shortly on a £297,000 project for Basildon Development Corporation. This involves construction of an exceess road to a new commerscreen road to a new commermethod power cocket.

The buttons employ only 12 while A Dutch company is needed for connection are a offering U.K. cutes, bard-but by 1-inch cold water pipe, and drain the drought, water at £1 per outlet and a 240V 13A fused and metric tonne, plans which might care Rritain as much as 1,000m. The buttons employ only 15 switched power socket.

and the third air at 80 degrees C better quality water have been via a blower; operation of either of the last two overrides. of the last two overrides automatic time switches which can be adjusted between 10 and 60 seconds. More from the company at Wilton, Salisbury, Wilts. SP2 0BH (072274 3505).

General contractor for the pro-

The dynamic Group in the building business.

TERRAPIN



# Water from

save Britain as much as 1,000m. First button dispenses soap gallons a day by recycling a be second water at 50 degrees C better quality water have been

able to supply unlimited recycled water at ap per 1,000 gallons against ten times as much for

If earbon filtering media were used rather than the sand beds normally applied, according to the company, all organics could be removed again and again. And the cost of replacing sand with carbon is only "fractionally more" than replacing sand filters with new sand—prior to rejection the water to the drains. rejecting the water to the drains.

Chemviron, now Europe's largest producer of granular

ing, partial central heating, Nottingham for the first phase at 12. High Street, Hampton extensive re-plastering and complete re-decoration.

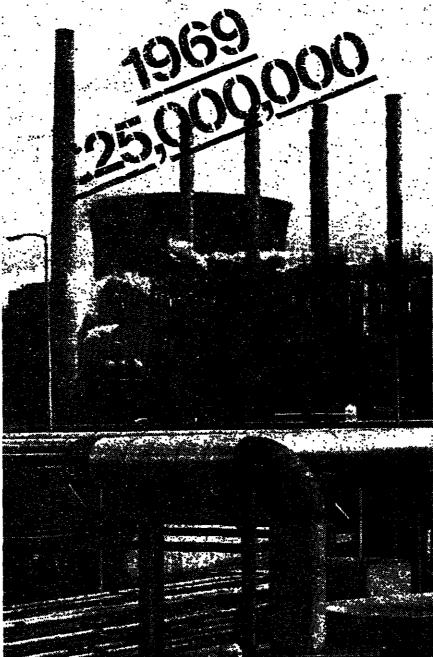
The development of the Glasgow Royal Infirmary Wick, Kingston on Thames. The Dutch company testing

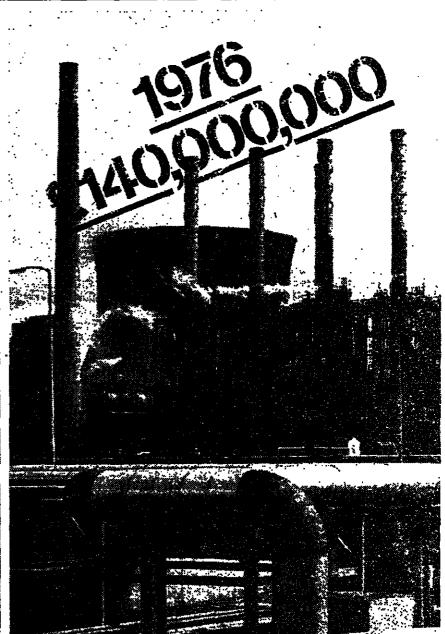
pleted Tarmac moved in a Dri- ject is John Laing Construction the U.K. market is called Air 50 unit These compact de- which has also ordered 2,000 Hatenboor-Neptunus and its humidifiers draw in damp air brick tile faced sill units and offer of £1 per metric tonne using a powerful for The six is 500 structural multiple and offer of £1 per metric tonne numinumers unaw in damp air using a powerful fan. The air is then passed over an evaporator, cooled and condensed to extract all moisture which is drawn off into a removable container.

The dry air is then rapidly of the contract is about £500,000.

The panels are produced in it is thus undercutting other white concrete which have been European sources by about \$0.000. The company is on Rotterdam

atmosphere—with a vastly in-ribbed fin:sh. The largest panel 76 75 42 or 76 21 10 at 11, Speed-creased capacity to absorb still is 6.2 metres long and 2.5 metres well Straat, Rotterdam, The more moisture—quickly drying high.





# Inflation. To keep ahead ICI is investing £1½ million every day

Inflation hits companies as badly as it hits people. The last time ICI built a plant to produce

ethylene - from which plastics, fibres and other chemicals are made - was in 1969, and it cost £25 million. The new and only marginally bigger plant now being completed on Teesside, jointly owned by ICI and BP Chemicals, will cost £140 million.

To stay ahead, ICI is spending a massive £450 million this year on new plant - that's about £1\frac{1}{2} million a day.

To invest at this high level you must first make money. So it's good news that ICI profits after tax are up for the first half of this year - to £154 million, compared with £105 million in the same period last year - an improvement helped by record exports.

Who benefits? Not just ICI's own employees, but close on 40,000 others in companies that design, construct and equip new plant for us in Britain.

### **How ICI profits help investment**

INCOME FROM SALES in the first half of 1976...... £1960m Minus Wages, salaries, raw materials, depreciation and other costs ......£1719m PROFIT (before tax) ..... Minus Tax....£87m Business partners etc.....£11m Profit retained to develop the business...£98m

ICI puts profits back to work

# CHIVERS

BUILDING & CIVIL ENGINEERING CONTRACTORS JOINERY MANUFACTURERS

TEAM PROJECTS ELECTRICAL CONTRACTING W. E. CHIVERS & SONS LTD.

HEAD OFFICE: DEVIZES 2121 Branches at LONDON, READING, ROMSEY & CHELTENHAM



CONDON ROAD, NORTH CHEAN Nancestie-upon-Tyre DAMS - POWER STATIONS NAJOR RCAD & BRIDGE W

### IN BRIEF

 A contract valued at about £480,000 for the supply of primer and coal tar cnamel for the protection from corrosion of a new pipeline to carry petrol and other refined oil products from a refinery at Mombasa, Kenya, to a tank farm to be built at Nairobi, has been won by Metrotect of Tonbridge, Kent, a memof the Anglo American Asphalt group. The contract was awarded by Kenya Pipeline

Mod-L Building Systems (Knutsford) has ordered three Monobox goliath eranes valued at £110,000 from J. H. Carruthers and Co., East Kilbride, for instalin factories in Arabia and West Africa.

■ The Home Office has awarded Walter Lawrence (East Anglia). member of the Walter Lawrence Group, a £104,000 contrac to undertake work at H.M. Borstal, Hollesley Bay, Suffolk

● The first Janunese-made submersible decompression chamber or underwater work has been developed and is being marketed by NKK (Nippon Kokan KK).

# ≝EABOUR NEWS

# **TUC** membership lifted by women

BY ALAN PIKE, LABOUR STAFF

RECRUITMENT among women tiles and clothing-had shown has been a major factor in drops in both male and female taking membership of TUC membership, presumably be-ariliated unions to a record cause of the impact of unemploylevel of more than 11m, in the ment. The biggest increases, past year.

although largely explained by
There are now more than 3m, new affiliations and re-affiliations
women trade unionists for the during the year, are in printing.

first time and they are taking public employees and civil out membership at a significantly servants.

A rise of 672,602 in the TUC pensions rally yesterday Mr. Jack membership total since last year Jones, general secretary of the to 11.036,326 is partly accounted Transport and General Workers' for by unions affiliating during Union, repeated demands for the year. But about 250,000 of pensions of half gross average the new members result from earnings for married counters' and the new members result from earnings for married comples and

The uncertain economic posi- with frequent reviews to keep tion, with widespread fears of pace with inflation, redundancy, is clearly a reason "I well understand the econoredundancy, is clearly a reason "I well understand the econo-for more workers seeking the nuic position in the country but protection of union membership. if there is a priority that we Mr. Len Murray, TUC general should apply it is the priority secretary, said yesterday "significantly more than 50 per cent." Mr. Jones said that in about of working people available for a year's time he would be an unions.

Only three of the TUC's 18 trade groups—engineering, texture.

Mr. Jones said that in about a year's time he would be an unions.

Only three of the TUC's 18 the fight for better pensions then.

one-third for single old people

# Two more unions join retirement campaign

BY OUR LABOUR STAFF

SUPPORT for a reduction in the cussions can be held until all male retirement age to 60 has the complexities on the new come from two more unions, the Social Security Act are resolved. and the National Association of issue of his union's journal that Schoolmasters. reducing the retiring age to 60 Schoolmasters.

This follows similar claims was "far more important than recently by shop stewards at reducing the working week to Leyland cars, steelworkers and 35 hours."
The National Union of Mine- According to Mr. Terry Casey.

but powerful Electrical Mr. John Lyons, EPEA gen-Engineers' Association eral secretary, said in the latest

workers.

The EPEA's claim for early Association of Schoolmasters, retirement has been one of its early retirement in the teaching negotiating aims for the past two profession would enable many of years. The Electricity Council the estimated 20,000 unemployed has told the union no firm dis-

# 'Cut private practice' from NHS

Health Service unions with a combined membership over 2.5m. are to-day launching a renewed campaign against private practice within the National Health Service.

With the TUC dehating private medicine at Brighton to-morrow, the campaign is aimed at putting pressure on

the Government to tighten the legislation still being considered by Parliament to phase out private practice within the The five unions are jointly sending out over 250,000 copies of a leaflet explaining their case to the public, other unions, and MPs in an attempt to counter publicity by senior

doctors, private hospitals and health insurance companies in favour of private practice.

The leaflet claims that private practice is subsidised by the taxpayer and that private patients jump the queue for admission to hospitals, so lengthening waiting lists for NHS patients.

And it suggests that nurses

And it suggests that nurses and ancillary staff are expected to spend more time dealing with the demands of private patients, who are not necessarily those in greatest need of

Many part-time consultants, it says, concentrate on private patients and so junior doctors have to work longer hours to deal with the Health Service patients. As a result, many junior doctors are given inadequate training and super-

• The council of the Royal College of Nursing has voted unanimously to seek certification under the Employment Protection Act as an independent trade union-to put the College on an equal footing with other NHS staff associa-

# 'Slow road' for worker-sharing

BY RAY PERMAN, SCOTTISH CORRESPONDENT

day in a submission to the The council takes the view that flexibility necessary to fit com-Bullock Committee on worker with or without legislation the panies of different sizes and participation by the Scottish trend towards greater employee types. Council (Development and Indus- involvement in decision-taking in a time-scale, and should be

in West Germany and Sweden, improved efficiency and higher a Government agency. the council has made case living standards.

Studies of three Scottish comPanies which have experimented lation, the council feels that the Edinburgh. 50p.

NATIONAL MANAGEMENT GAME

International Computers Ltd. and the

Institute of Chartered Accountants in

the Institute of Directors and

ngland and Wales in association with

A GRADUALIST, pragmatic with employee-participation in kind of progress made by the approach towards industrial decision-taking: A.I. Welders, three companies studied could be democracy, rather than instant General Motors (Scotland) and straitjacketed if the law tried to legislation, is recommeded to Scotlish and Newcastle Breweries, be comprehensive and lacked the

Scottish companies will gather accompanied by a code of As well as reviewing progress momentum. This could lead to practice administered initially by

Towards Industrial Democracy:

# ● NEWS ANALYSIS—ELECTRIC MOTORS

# The choice is: profit or patriotism

future are epitomised by the company should be almost ex-ment's accelerated investment surplus of only about 10m.— range, and especially about 10m.— range a

out is that imports are proving far more resilient than had been seeded. After the surget in far more resilient than had been sider much more should be done it to expand production and desides to lay down more plant to expand production and desides to lay down more plant view that further dramatic inview that further dramatic industry is of national import. So as to ensure that expense of profitability.

The state of the electric motor diedustry is of national imports are now been expected. When the result that imports are proving a number of the major continent is due instead, they are upon a number of the major continent at manufacturers. The apparent imports on the provide a number of the major continent at manufacturers. The apparent imports on the provide a number of the major continent at manufacturers are successed their expactity in drama, they do not again fail to provide the expense of profitability.

The state of the electric motor and exports diverted to the motors they need with the motors will again be in short supply in the next boom: they were recognised a decided that they have expanded of continuing to be a supply in the next boom: they were recognised a decided they have expanded of soft in the part of the industry in 1973—4.

More fundamentally, the state of the industry (and especially of the industry (and especially of the industry (and especially in their own plants— of the industry (and especially in their own plants— in imports are provided and the following the provided and the following the provided and the following the provided are now being encouraged to do.

The continentals have since from the following the provided turn for the better last time for the provided turn for the better last time for the better last time for the provided turn for the better las

SOME of the most crucial its trade position) raises the going forward, some with Should this continue the sector U.K. have maintained their he questions for Britain's industrial thorny question of whether any assistance from the Govern-would end the year with a so far this year. Above that it future are epitomised by the company should be almost extended investment surplus of only about 15m.— range, and especially about the continued of the company should be almost extended investment surplus of only about 15m.— range, and especially about 15m.— range are clusively concerned with maris scheme. The industry gave these which is real torus would be 100hm that are fulling the

which has just become available after months of secrecy.

The delay in publication is class streemedy awkward compromise between the view of report—both overtly and by inthose—especially on the Government and union side—who consider much more should be done still under, pressure from all to expand production and exports, and the manufacturers are without Government with the manufacturers are support). So as to ensure that they do not again fail to provide the expense of profitability.

The state of the electric motor industry is of national imports are sucked with sides to lay down more plant to expense of profitability.

The state of the electric motor industry is of national imports are sucked with the motors they need with the motors they need with the motors they need with the manufacturers are widespread fears among the case, its balance of trade, this doubt over whether this will doubt over whether this will of the raises of the report—though only there paragraphs later it takes there is some optimism that imports its some optimism that imaises some optimism that imaises.

What the report—doth optimism that imaises some opt

# Thames rents week on New York TV

BY ARTHUR SANDLES

over the evening running of entirely British in origin, a Channel 9 television in New great many British companies York to-morrow. The exercise, have bought time, including costing nearly \$1m. gross but Harrods, Cunard, Laker Airways, "tens of thousands" net, lasts one week.

Thames has rented the time from WOR-TV, one of the New York minor TV "leaguers." at a documentary about itself and

Thames has rented the time from WOR-TV, one of the New York minor TV "leaguers." at a documentary about itself and price probably not much less than £200,000. "If the pound into a selection of its own shows.

The bone is that U.S. TV comhad not fallen since we signed The hope is that U.S. TV com-(it was at \$2.04 then), we might panies will spot a few tempting have broken even," the company items and buy them.

THAMES TELEVISION takes In a programme schedule over the evening running of entirely British in origin, a

aid. Against the Monday night Thames direct income will be ratings winner. Rhoda, Thames drawn from advertising. It is will offer the Benny Hill Show, sticking as far as possible to Later in the week Police Woman. British style and thus limiting at present doing very well in the time for advertisements to the U.S. charts, will have to 9 minutes an hour, rather than match her strength against the the U.S. top level of nearer 14 British programme Special

# 'Soon No. 1 film-maker'

Television Corporation has lication as saying: "It is our caused something of a stir here, intention, within two years, to because of a promise by its film-become the dominant force in making subsidiary, ITC, that it film production and distribution will soon be the world's biggest in the world."

Operator in the film business. It is suggested that \$23m.

former title Sir Lew Grade, is finance and pre-sales. taking advertising space in trade Lord Grade has made it clear papers to say: "We're making he is convinced that the big-

BOARD MEETINGS-

Revertea
Trust and Agency Co. of Australasia
CIVIDEND 6 INTEREST PAYMENTS—
Associated British Foods 1.135p
Associated Leisure 1.335p
Associated Leisure 1.335p
Associated Portland Cement Db. 4½pc
Autt and Wiborg Db. 4½pc
British American Tobacco Ln. 3½pc
Calcutta Electric Supply 6a
Collins 1G. and W.J. Db. 4½pc
Dewhurst and Partners Ord. and A Ord.
0.235p
Grd International Cap. Corp. Ln. 30c
Grd International Cap. Corp. Ln. 30c
Imperial Micial Industries Ln. 3½pc
Imperial Micial Industries Ln. 3½pc

Dewhurst and Partners Ord. and A Ord. 0.2396
Ford International Cap. Corp. In 3pc
Ford International Cap. Corp. In 3pc
Great Northern Investment Trus 1.05p
Imperial Metal Industries In 3'apc
Joseph I-Leopoid: In. 4'noc
Lee Cooper 3.25p
Lymon Moldings 1.65p
Misclanary Orkshire Moldings In 3'apc
Norton Industries ID. 4'apc
Olympia Ob. 3'apc
Peterborough Motors Db. 4'apc
Reabrook Investment Trust 0.45p
Reabrook Investment Trust 0.45p
Rediand Ob. 3'apc
Sears Engineering Ob. 4'apc
Sears Engineering Ob. 4'apc
Status Discount 0.55p
Trident Television A Ord. 0.707p
Vosper Transverott 2.6625p
Waddington (John Ob. 5'apc
Waddington (John Ob. 5'apc
Waddington (John Ob. 5'apc
Waldington 1.5 pc
Waldington Ob. 5'apc
Company Motors Ob. 5'apc
Company Mo

orkshire Enemicaia oo. ... TO-MORROW COMPANY MEETINGS— adulipar Tea. 37. Mincing Lane. E.C..

Holius Bros. and E.S.A., Howard Hotel. W.C. 12 W.C. 12 Selgrave Square, S.W. 12

anger (J. E.). 87. Bertholomew Close. E.C. 13.15. For Offshore Services Gt. Eastern Hotel, E.C. 11.30 hitbroad Chiswell Street E.C.. 12.

Thitbroad Chiswell Street E.C., 12, BOARD MEETINGS—

man (B.) and Sons, Tower Hotel.

Bros. and E.S.A., Howard Hotel.

Aurora Holdings
Fox's Biscuits
eisure and General
tweart Plastics
Interime:

GRADE'S Associated Variety, the U.S. 'show-biz' pub-

operator in the film business.

In a country that already has such groups as Fox. MGM, United Artists and Disney, this claim by a foreign organisation might normally provoke amusement. But ITC is backing it with a formidable list of productions.

Lord Grade sticking to his secondly of guarantees, parfi-Lord Grade, sticking to his assembly of guarantees, part-

the words 'major motion picture' budget family (in a very broad mean something again." budget family (in a very broad mean something again." mean something again."

sense) picture with international Government financial transMr. Abe Mandell, head of ITC appeal is what is going to make actions for August, including

# Slower rate of growth in lending 'indicated'

A SLOWER rate of growth in bank lending could be indicated by new figures due out this week. This comes after the sharp rises in recent

Increase in lending shown by the banks has contrasted with recent evidence of relatively slow economic recovery. Higher demand for loans has recovery. appeared to reflect the need for finance for higher stocks of imported materials and increases in working capital needs partly imposed by higher materials costs. The large increase in loans

in the month to mid-July, announced last month, caused the biggest jump in the broadly-defined money supply for more than a year. If the rate of growth in lending is sustained it will arouse concern in the C'ty over the potential impact on the money supply and the possibility that interest rates will have to rise.

### Exaggeration

It was widely felt that the July figures, when the London clearing banks showed an underlying rise of about £350m. in their sterling lending to the private sector, exaggerated the figures for the clearing banks. due on Wednesday, will be examined closely for evidence of the level of hanking activity.

The progress of the monetary situation will be illustrated on Thursday by the publication of the borrowing requirement.

DIVIDEND & INTEREST PAYMENTS—

Pedagry 11 TPC 1475, 3-4pc.

Percenigning Retractories 10cts.

COMPANY MEETINGS—

Vana Group, Cardin, 3.

Vana Group, Altrincham, Cheshire, 11,

Vana Group, 3.

Vana Group, 3

Allied Maquiacturing and Trad Danks Gowerton, 1,4218750 Fraser Ansbacher 0,0325p Jamaica Sugar Ests., 15p Treasury 11 ppc 1979, 5upc. Verceniging Refractories 10cts.

# **Dell starts trade** talks in Greece

ATHENS, Sept. 5.

EXPANSION of Anglo-Greek completion of Athens and & trade and British interests in onica sewerage systems. projects in Greece will be discussed by Mr. Edmund Dell, the Trade Secretary and Greek cabinet ministers.

British experience in offsho installations and undergrow railway projects such as the VI toria Line in London is const

of Greece's economic and trade
ministers, including Mr. Panayotis Papaligouras, the Minister working out a joint Europe
of co-ordination and planning,
who is the country's economic counteracting the trend in ce
overload the will also meet Mr. Evangelos Averoff-Tossitsas, the transport requirements to Minister of Defence and Mr. use of their own flags. Demetrios Bitsios, Minister of

British interest in participating gained from the special arrang in the planned new Athens International Airport, the Athens of membership should prounderground railway, the electri- helpful to Greece. fication of the Greek State Railways, offshore oil and natural ment members of the country gas installations, re-organisation business world and will visit th of the postal system and social installations of a bauxite minin services, computerisation of gov. company near Delphi, centa ernment agencies and enter. Greece. prises, and modernisation and Reuter

official visit to Greece to-day.

He will talk with almost all of Greece's economic and trade on Greece to-day.

The talks will touch on the control of Greece's economic and trade on the control of British and Greek chimines and Greek chimin

Demotrios Bitsios, Minister of Questions related to Greece entry in the EEC are likely to the discussed. British experient

Mr. Dell will also meet pron

### **APPOINTMENTS**

# Non-executive post at Mather & Platt

Mr. S. R. Harding has been wire factory of Connollys (Black

Mr. G. Rogers has been Mr. Maurice E. Leach has been appointed to the Board of the appointed chief signal and the BRITISH NURSING ASSOCIATION communications engineer (as administrative director. Mr. BRITISH RAIL Eastern Region

NAYLOR BROS, has made the The following Board changes following group appointments. Mr. have been made by GRATISPOO David Billington, sules director of INTERNATIONAL HOLDING (Clayware).

Interings:

Mr. S. R. Harding has been appointed a non-executive director of MATHER AND PLATT.

\*

Mr. Alan E. Thomas a non-executive director of JOHN WILL-MOTT HOLDINGS, has become an executive director with responsibility for the marketing of the group. He continues his association with Strutt and Parker as a consultant.

Wire factory of Connollys (Black lev), now consists of Mr. G. Travis, executive director in the group, manager); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. W. L. John (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. G. H. Dunn (secretary/accountant); Mr. G. H. Dunn (con mercial manager); Mr. G. H. Dunn (con manager); Mr. G. ager).

Rogers was previously executive based at regional headquarters is director, management services, York. He succeeds Mr. B. (with Federation Mutual Insurance, Baldwin, who has retired.

David Billington, sules affector of INTERNATIONAL MOLEONORY Naylor Bros. (Denby Dale), Mr. Mr. Ron Houslip becomes chill Brian Riding, secretary to the man of the group from the post ton of group marketing directly production director, Naylor Bros. Clayware).

\*\*

Clayware).

\*\*

Mr. Ritchie L. Spencer has been appointed to the newly-created post of personnel director for the RELIANT MOTOR COMPANY.

\*\*

Mr. Jim Fallon has been give for the good of group financial director and the good of group financial director. It was service as managing director. It was give for the good of group chief executions.

Agricultural Mort. Cpn. 6/succib. 1935-90
Sings 7/spcbb. 51-84 3/spc 9/spcbb.
BO-85 4/spc
Allerdale 10/spc8ds. Red. 16.377 5/spc
Allerdale 10/spc8ds. Red. 16.377 5/spc
Brent Voluce8ds. Red. 16.377 5/spc
Brentwood 10 wolds. Red. 16.377 5/spc
Carborundum 22/1 sents
Davenbood 10 wolds. Red. 16.377 5/spc
Carborundum 22/1 sents
Davenbood 10 spc8ds. Red. 16.377 5/spc
Carborundum 22/1 sents
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Carborundum 22/1 sents
Davenbood 10 spc8ds. Red. 16.377 5/spc
Carborundum 21/spc8ds. Red. 16.377 5

## BUSINESS **OPPORTUNITIES**

# ARE RECOMMENDED PPROPRIATE PROFESSION BEFORE ENTERING COMMITMENTS.

DSL Grade in £ DSL Grade in £ 

Note—Diamonds in the range we recommended for investment have appreciated by approximately \$00% since 1st July, 1969. appreciated by assessince 1st July, 1969,
since 1st July, 1969,
DSL 9 add is made up as follows:
Colour Clarity Carat
e.g. 120 a 156
Make is always goodwery good. All stones are graded in Laboratories using the most, mo Brochuse with procedure for buying and selling graded and certified diamones is available from: DIAMOND SELECTION LIMITED n House, 57a Hatton London EC1N 850 Tel.: 01-405 8045

# COURSES

### POLYMER ENGINEERING PART-TIME MASTER'S COURSE

A course of study and plant experience for those engineers in the plasters industry who plan a career in product and tool design, plastics production technology or processing machine design. A pattern of options is being offered.

A translance is on one day weekly during academic terms and the course is open to those with graduate equivalent engineering qualifications of persons of such experience and maturity as would enable show to benefit by attendance. Suitably qualified entrants may submit a design study or dissortation after complating the course in order to obtain the degree of M.Tech. The course is planned to commence in October 1976.

Further details from:

Further details from: GJL Griffin Department of Polymer Science and Technology. Brunel University. Uxbridge Middx. UBB 3PH

### Entertainment, is quoted in money. WEEK'S FINANCIAL DIARY

The following is a record of the principal business and financial engagements during the thoughth S week. The Board meetings are mainly for the purpose of considering dividends and official indications consultant. are not available whether dividends concerned are interims or finals. The sub-division shown below TO-DAY

COMPANY MEETINGS—
Danae Investment Trust 44. Bloomsbury
Henderson-Kenton. Hotel Inter-Continontal, Hyde Park Corner, W. 12.
Lynton Holdings, 1-2. Mason's Arms
Mews, W. 12.
Mebray Group. Hemel Hempstead, 9.30.
Mining Supplies. Doncaster. 12.
Tremierts Holdings. Hemel Hempstead, Carpots Interies;
BOARD MEETINGS—
Finals:
Corneating Syndicate
Walker (Thomas)
Linteries;
Mebray Group. Hemel Hempstead, 9.30.
Mining Supplies. Doncaster. 12.
Tremierts Holdings. Hemel Hempstead, Carpots Interies;
BOARD MEETINGS—
Finals:
Corneating Meeting Syndicate
Walker (Thomas)
Linteries;
Methods (Carpots)

Restabell
Carpots Interies;
Board Meetings—
Corneating Syndicate
Restable.

Corneating Meeting Syndicate
Restable.

Finals:
Corneating Meeting Syndicate
Restable.

Finals:
Corneating Meeting Syndicate
Restable.

Finals:
Corneating Syndicate
Walker (Thomas)
Linteries;
Maker (Thomas)
Linteries;
Restabell
Carpots Interies

Restable.

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	Marie Control			

Entry lists are now open for teams wishing to compete in the 1977 National Management Game - the annual championship that provides invaluable management training by simulating a boardroom environment in which team members work together to thrash out managerial issues - within a time limit, and under the pressure of competition.

The problems and risks relating to realistic business situations and the consequences of the strategies adopted are posed and appraised by computer. And each team is, in effect, a company making decisions on the deployment of its financial, marketing and manufacturing resources. The winning team is the one whose final balance sheet shows the greatest net profit.

Round 1 begins on December 29 1976 and the finals take place in London in July 1977. Entry fee per team: £50, including VAT. Closing date for entries: November 12 1976.

THE PRIZE

and entry to the European **Management Game finals** in West Germany

Individual awards are made to all finalists.

į	Request for entry form
	To the National Management Game Administrator, International Computers Ltd. Victoria House, Southampton Row, London WC1B 4EJ
į	Ploase send an entry form and full details of the 1977 NMG
	l enclose the entry fee of £50, incl. VAT.
	Kindly tick boxes as appropriate
i	NAME
	ADDRESS
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NATIONAL MANAGEMENT GAME 1977

Politimada International, Portman Hotel, W., 12.30

imren Islain (Richard) ostain (Richard)
iarnar Scothlar
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harpe and Fisher
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urner and Newali
DIVIDEND & INTEREST PAYMENTS—
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revision Premier Investment Trust 1 4p
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rephases Db. 31:00
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un AlHance and London Insurance
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olsower 11 lapt. 8ds. Red. 55.7149
rent 11 lapt 8ds. \$5.7149
allough 21.43p
herwell 11 lapt.8ds. \$5.7149
leveland 11 lapt.8ds. \$5.7149
leveland 11 lapt.8ds. \$5.7149
inckiev and 8ds. \$5.7149
inckiev and 8ds. \$6.7149
Bds. \$65.7149
Bds. \$65.7149 W. 12.
Property Investment and Finace 111 Park
Lane, W. 12 30
F.D Gro. Winchester House, E.C., 12.
Traford Carpets, Manchester, 12.45.
BOARD MEETINGS—
BOARD MEETINGS—
Briss Mines
Kirross Mines
Kirross Mines
Legile Mines Brett 11 lact Bds. £5.7149
Bulloudh 2.143p
Cherwell 11 lact Bds. £5.7149
Chester-14-Street 11 lact Bds. £5.7149
Chester-14-Street 11 lact Bds. £5.7149
Hambleton 11 lact Bds. £5.7149
Hambleton 11 lact Bds. £5.7149
Hindley and Bosworth 11 lact Bds. £5.7149
Hindley and Bosworth 11 lact Bds. £5.7149
Kingston Lipon Hull 11 lact Bds. £5.7149
Kingston Lipon Hull 11 lact Bds. £5.7149
Kingston Lipon Hull 11 lact Bds. £5.7149
Muj Sursset Water Bpc.Pt. 1981. 4pc.
Newtastle-under-Lyme 11 lact Bds. £5.7149
North Tyreside 11 lact Bds. £5.7149
North Tyreside 11 lact Bds. £5.7149
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North Eds. £5.7149
Sanger (J. £1. 2.655.
Revold Lin. 31 lact.
Revold Lin. 31 lact.
Revold 11 lact Bds. £5.7149
Sanger (J. £1. 2.655.
SedgeBeld 11 lact Bds. £5.7149
Sanger (J. £1. 2.655.
Tamworth 11 lact Bds. £5.7149
Sanger (J. £1. 2.655.
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Waterington 11 lact Bds. £5.7149
Waterington 11 lact Bds. £5.7149
Writh 11 lact Bds. £5.7149
York 11 lact Bds. £5.7 THURSDAY, SEPTEMBER 9
COMPANY METINGS Airfur Inds... Royal Garden Hotel W 2.3d. 4.25 cents
Alinatt London Props. Winchester Hse.
E.C. 12
Asscrid. Television ATV Hse... Gt. Cumberland Place W. 12...
Birmingham Mint Sham... 12.
Brent Walker. 23. Tower Place. Tower Hill E 4.30.
British Colton and Wool Dyers. Man. Inth. Bullness Mangham Earlier Hse. Christy Bros... Chelmstord 12.
Bulmer (H. P. I Herelard 2.30.
Christy Bros... Chelmstord 12.
Danks Gowertos. Dudley. 11.
Cranam Wood Steel. Apercorn Rooms.
E.C. 12
Graham Wood Steel. Apercorn Rooms.
E.C. 12
H.A.T. Grg. Wringlon, Avon 12.

Graham Wood Steel. Apercorn Rooms.

Glamdergan 10/spc8ds. Red. 16.3.77

Juncks Glamdergan 10/spc8ds. Red. 16.3.77

Sipport School Carrick 10/spc8ds. Red. 16.3.77 Mid Glamorgan 101spcBus Peca 16 3.77 Singe Middlesbraugh 101spcBds. Red. 16 3.77 Model of the Communication of the

E.C. 12.
H.A.T. Gro. Wrington, Avon 12.
H.A.T. Gro. Wrington, Avon 12.
Hampton Gold Mining Areas Chartered
Insurance Institute. E.C. 12.
Heron Motor. The White House Regents
Park, 12. 12. Pentecost. Nottingham 12. Ullmann, 25, Milk Street, E.C. 12 ireland (Ernest) Barb, 11.30. Kima Kelias Rubber Ests., 1-4, Gt. Tower Street, E.C., 12. Mischell Somers, Connaught Roms, W.C. London Properties. 155. Queen's irt. Queensway. W.. 12.15 rs latel, Whitchayen Cumbria. 12. ted Gas 14ds., Connaught Rooms. W C. 12.
BOARD MEETINGS—
Finals:
Antoragasta (Chili) and Bolivia Railway
Armstrong Equipment
Cableform

pc 7 10 lapcEds. Red. 16 3-77 5 lapc 10 lnc. 50 cents 30ck 10 loceEds.Red. 16:3-77 5 lapc ton 10 lapcEds. Red. 16 3-77 5 lapc lers Corpn 27 cents MITY 51k. 5::pc 2008-12 2 lapc. 6 lapc 7 3 lapc Trasser's Corpn 47 6-ms Trassery Sik. 5::pc 2008-12 2-ipc. 61-pc 1977 3-spc Tweedalo 10-ipc8ds. Red 16 3 77 5'-ipc Warner-Lambert 25 cents Warterd 10-ipc8ds. Red. 14 9-77 5'-ipc West Dorset 10-ipc8ds. Red. 15:5 77 5-ipc West Dorset 10-ipc8ds. Red. 18.3 77 Simpo Walthread A and B Ord. 2 2698p Yeoman lavest Trust 2 2755 SATURDAY, SEPTEMBER 11 DIVIDEND & INTEREST PAYMENTS— Peterborough Motors 1.21p

وكنامن الأحمل

York is the business capital of

the U.S. and generates more

North Atlantic traffic than any

other U.S. centre. It has more

connecting flights with other

from Kennedy Airport, whereas

Airport.

do not seem to apply.

# Businessmen are major users of Concorde. Michael Donne and Nicholas Leslie look at how they and their companies rate its value in terms of prestige and speed.

# Balancing a supersonic cost

CONCORDE HAS now been in service on the London-Bahrain route since January 21, and on the London-Washington routes since May 24. Although utilisation is still very low, this is sufficient time for British Airways to be convinced that the aircraft can justify its existence by making money on direct operating account although not yet yielding profits on the total investment of £155m involved in buying five aircraft. So far only two have been delivered and BA has spent over 178m,

The load factors (the number of seats sold) on the North Atlantic run are excellent. From Washington to London. the average load factor is 90.2 per cent., but westbound to Washington it is 93.2 per cent.

Bahrain route, about 20 per cent. very low priority. of the passengers come from Australasia, this indicating that people want to fly subsonically as far as Bahrain, and then strongly in the list.

New York is still the biggest similarly has no specific policy, on Tuesdays, and Indiana. single originating centre for although any use of Concorde traffic accounting for some 17.4 would be likely to be limited per cent. But overall, on the to very senior directors or North Atlantic run some 80 per executives.

### Three reasons

of the passengers sufficiently to categorise them by occupation. home-town, reason for travel customers travel for one or more of three main reasons, the because Concorde is something new: it is there, and the passenger to his destina- value to last for long. While it class fare. sonic Jumbo jet on the Atlantic account. -so that he feels fitter and fresher. Third, so far as U.S. Atlantic schedules are so through a system of currency MOVING JOBS



Travellers check in at the Heathrow Concorde desk

34.8 per cent, but is much favour, so that the ride at least to arrive in Washington (at the situation.

passengers are businessmen, operate a policy about who reasonable hour, whether he is currency, a traveller can get the far the Concorde network is categories: the mandatory and be found almost anywhere and It may be noted that I have with a wide-mix of nationalities might use it, and when. The planning to work or travel on round trip for \$1.181 instead of too restricted to be of any major the desirable. Of the former, is a potent slaver, unpleasant large force or strange diseases. but perhaps a preponderance most common factor seems to the next day. It is this ease of the normal \$1,324, a saving of benefit. But when it has been to that travel on Concorde connection to other destinations \$143. Similarly, by buying a considerably expanded—say to still required for many countries, the U.S. in particular, and several varieties of malaria, borees. Equally I have ignored to the Bahrain run. Some facts, economic terms while the bulk of the high load factors on the barries and to Singapore and Melbourne has to be repeated every three Anti-malarial tablets have to be volcanic eruptions, earthquakes, however, are significant. On the Bahrain run that are the confined to American jamthe Bahrain run. Some facts, economic terms while the bulk of the high load factors on ington from London, at f352, or and to Singapore and Melbourne has to be repeated every three Anti-malarial tablets have to be volcanic eruptions, earthquakes, the BA Washington route.

\$627, a traveller can in fact fly and perhaps also to Hong Kong years. Cholera immunisation is taken two weeks prior to going hurricanes and tidal-waves as,

Company policy Barclays Bank International London on a Friday night, it ha does not admit it, it may corde is beginning to make its required for much of South and may well die from his folly, foolhardy. sonically. Abu Dhabi appears to says that any personnel flying factors (and the heavy forward be the most popular onward Concorde—and none have yet bookings) to be a disadvantage destination from Bahrain, howwould have to justify the trip from a businessman's point of
ever, while Dahran also figures in terms of the importance of view, while from this autumn
strongly in the list. rongly in the list. The business in fland, and another frequency will be On the Washington route, finance. The Beecham Group on Tuesdays, and inbound to

### **Fatigue**

Other companies with similar BA makes a particular point fic in both directions is making views include Grand Metro- of stressing the ease of making connecting flights at one or politan, Royal Insurance Group connections, especially since it other end, while some 30 per and FWI and most agree with balancing at the connections. other end, while some 30 per and EMI, and most agree with helps to cut down the total cent. connect at both ends, and the views put forward by Bar-travelling time. It must play use the Concords sector as use the Concorde sector as a clays. Many companies, includ- a part in combating fatigue. speedy middle link in the jour- ing BOC International, Plessey. Jet Lag." or "Time Zone ey chain.

and Richard Costain, make the Fatigue is a subjective phenoOne odd fact is that 28 per point that economic justifica menon. Everybody suffers from cent. of BA's Washington to tion is important, indicating it, but some much more than London passengers go on to that out of the U.K., at any others. It is an arguable point Paris, nothwithstanding the rate, the 20 per cent. surcharge whether crossing time zones existence of Air France's own is of considerable significance. faster enhances fatigue because direct. Washington-Paris Con- BOC says its directors may fly the body's rhythms are required first class travel while at Plessey quickly. But having travelled the urgency of the job involved on Concorde several times I rould be the main criteria. Know that one does arrive at Each of the three main one's destination fresher and The BA studies have not yet Each of the three main one's destination fresher and gone as far as identifying each airmans is worth analysing in and for the property of the control of the three main one's destination fresher and gone as far as identifying each airmans is worth analysing in and for the control of the contr Airways is worth analysing in and for that reason I prefer to

turn. First, prestige: Concorde travel Concorde.
is a big talking point among The third factor and so on But enough informathe U.S. business cocktail and throws up an intriguing situa tion has been obtained to indicate that most of Concorde's say one has flown Concorde is sent to fly Concorde from something which, like reading London to Washington at less Geographic, cost than for a first-class subsonic Jumbo ride from Washing-This is perhaps the least ton to London, notwithstanding is a prestige aircraft in which significant factor of the lot, and the surcharge on Concorde of to fly. Second, because it gets BA does not expect the novelty 20 per cent. of the normal first

tion, much more rapidly-in 3 is a good advertising point it is This anomaly stems from the hours 50 minutes as against not believed to generate sub-current depreciation of sterling seven to eight hours in a sub-stantial business on its own against the dollar, and from the fact that the airlines' machinery Concorde's for meeting these problems

BY SUE CAMERON

# The family life of 'gypsies'

Secondly,

are not properly consulted by take time off to find a house place for a number of years companies over moves to new Arrangements should be made and their companies then jobs in different parts of the for wives to meet other company decided to move them again in country according to a study of wives in their new towns and a very short space of time. "executive gypsies" carried out families should be provided with Many organisations also failed by the Institute of Science and as much information as possible to tell people of the effect a Technology at Manchester about their destination. University.

Marshall and Cary Cooper, to date information about their appears in the latest edition of career prospects so they can Management Decision. It shows work out all the consequences of that many companies move their a suggested move. executives without considering. The worst possible time for executives without considering. The worst possible time for ance—because they believed the disruptive effect on family a man to take up promotion in this was the only way to further life, without taking wives' views a new area was found to be when their careers. They then found the contract of without heirs have been supposed with young school. into account, and without being he is married with young, school

and their wives indicated that bilities and find it harder to down a move found there were the stresses and strains of mov- make new friends and house no adverse effects on their caring are far greater at certain buying becomes more difficult eers although one manager who than at others. The study says a good school: that when a company is planconsider "individual and family in the study had tried to solve he had been assured this would consulted.

## Conflict :

cally affect the unit as a whole, while settling into a new job quoted.

manager and his family." executives should be given in their jobs was the lack of 200 Keighley Road, Bradford

the

would be the main criteria.

. National " identifies " you.

In addition to this managers chances of future promotion.

The study, written by Judi should be given honest and up

circumstances - house moves, these problems by leaving their not happen. schooling. Wife's career plans families in their old homes while Younger wives resented being with a view to integrating them they themselves commuted back treated as "chattels" and many into the changes and demands and forth at week-ends. But this of those interviewed felt that of work." Wives should also be often had serious consequences companies did not consider their for the children and sometimes feelings enough. "Examples it put an intolerable strain on such as moves being arranged

"At the moment organica worrying that their fathers abroad without the missand s tions are contracting with one would desert them altogether. element of the family unit but And the men became tired of lower the new making decisions which radi- having to travel long distances

By operating this way they and house hunting.

The Mobile Manager and His often cause conflict between a The study showed that one of Wife. By Judi Marshall and manager and his family."

The biggest complaints of execu-Cary L. Cooper. Management of the biggest complaints of execu-Cary L. The authors also insist that tives who had to move around Decision, Volume 4, Number 4 plenty of notice about moves to information they were given. West Yorkshire BD9 new areas and in addition to this Often managers were told they £5.70p.

MANAGERS AND their wives they should have the right to would be staying in a certain

### Keluctance:

-because they believed themselves stuck on the promohonest about promotion age children. At this stage of themselves stuck on the promotion prospects.

At this stage of tion ladder and in addition they development development wives are tied were living in a town they distinctly responsished. Others who had turned the stage of th points in an executive's career because of the need to be near took part in the study said his career "went downhill" when Some managers who took part he refused to move even though

> when the wife is pregnant, wives Young children often started having to move their families abroad without the husband's

> > The Mobile Manager and His

**EXECUTIVE HEALTH** 

# Pills and jabs

BY DR. DAVID CARRICK

ALTHOUGH financial stringencies have reduced the number good load factors from London who can holiday abroad, some to Washington on Concorde. people are still able to afford But a survey of actual and the luxury of language diffipotential Concorde travellers culties and alien habits. Busistill appears to indicate that it ness executives especially seem is New York that will be the to be able to travel all over the most important market for their world so long as such peregripaaeroplane on the North Atlantions promise profits. tic run for a variety of reasons. The first, inevitably, is that New

The latter group, in my experience, is far less meticulous when it comes to rules concerning health before, during and after foreign forays than the holidaymakers. This is probably because wives, who rarely America and central Africa. I have left to last one of the of those flights go direct to and are far more conscientious and least seven days must be colloquially as "Gippy Tummy." meticulous where health is allowed between immunisations "Delhi Belly," "Roman Runs, concerned than are their con- against yellow fever and small- "Tokyo Trots," etc. which can

On the route eastbound to passengers are concerned, the designed as to make it as easy surcharges moves so slowly that From the British viewpoint, Many businessmen, either to be immunised against but probably the visitor en-Bahrain, the load factor is only exchange rate is in the dollar's as possible for a businessman it has not yet caught up with however, many of these factors through their own thought typhoid. Poliomyelitis, although counters organisms to which the 34.8 per cent, but is much favour, so that the ride; at least to arrive in Washington (at the situation.

better at 63.6 per cent, west- westbound to the U.S., is one logon. By early of the biggest travel bargains and Salver and Sa lessness, or that of their seniors, rare these days, can respecar natives are immune. The drug-

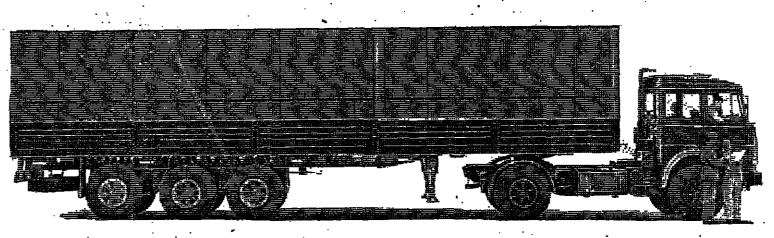
Although there has been some back supersonically for less than and Tokyo, a totally new situation is the paid to fly over on a Jumbo. tion will emerge. Even so, how-the pandemic still exists, and during the stay and for four maker or business traveller is arrives in Washington on a Astute Atlantic travellers have ever, enough information is these injections have to be weeks after returning home, unlikely to be troubled greatly Saturday lunchtime, and one in recognised this, and although emerging to indicate that Con-London on a Friday night, it BA does not admit it, it may corde is beginning to make its Yellow-fever immunisation is can outwit mosquitoes is a fool extremely unlucky or very

parts of the U.S. than washing accompany their men on busi- It lasts ten years. It should be commonest scourges of area is larger. Moreover, most in Washington many connections sorts, so that immunisations pox.

wreck a holiday or render a fine start or end at National (when needed) are requested in ample time.

Wisitors to the Mediterranean business trip a colicky catastocatal areas are well advised trophe. The cause is unknown in ample time.

10215



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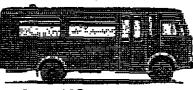
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MONDAY, SEPTEMBER 6, 1976

# How costs get pushed up

THE SHORT-TERM forecasting ing inflation with the ups and of inflation is now a flourishing down of trade union recruitart-a fairly straightforward ment-cames out equally badly. movements in wages, material put somewhat in question by in 1975, when most observers As one banker pointed out, the ment statistics are conservative, a subsidiary company which cent. of the U.S. rivals, a change (Swiss companies of cours makes and private a prices and other costs: but such the fact that wages and prices detected a slowdown probably Securities and Exchange ComThe Department itself is manufactures diesel, engines brought about in part by expanthe growing difficulty of expan-

ing technological capability of appreciates.)

Most observers believe that against British experience: but U.S. history.

Version, as put forward by Sir kind of wage-push or cost-push Keith Joseph, seems to suggest, theory, which seems to accord that monetary excess is the both with common sense and the proper model appears to able model of monetary inflational corporations outside the total a further boost.

Most observers believe that all over which will give appreciates.)

Most observers believe that a U.S. acquisition.

Mr. Rose, of Citibank, makes been plenty of evidence of the pint that by and large the growing interest in the U.S. to exploit their only among the biggest multiparticular. Hawker Siddeley, the particular. Hawker Siddeley, the same some of the main these companies, particularly the total a further boost.

So far this year there has been plenty of evidence of the pint that by and large the growing interest in the U.S. to exploit their only among the biggest multiparticular. Hawker Siddeley, the bankers on Wall Street agree own superior technology and areas such as South Carolina particular. Hawker Siddeley, the same such as South Carolina particular. Hawker Siddeley, the same such as South Carolina particular. Hawker Siddeley, the same some of the main these companies, particularly the importance of the total a further boost.

Mr. Rose, of Citibank, makes if the total a further boost.

Mr. Rose, of Citibank, makes if the total a further boost.

So far this year there has been plenty of evidence of the pincked up from announcements is the two-way flow of techno-companies are locating the promagnet than the colon.

So far this year there has been plenty of evidence of the promagnet than the colon.

So far this year there has examples which can be easily the Japanese. And then there the importance of the the total a further boost.

So far this year there has examples which can be easily the total a further boost.

So far this year there has examples which can be easily the total a further boost. result of the failure of succes- with what trade unions often sive governments to resist trade say about themselves. It is that umon excess, and to allow over- wage claims are designed to ambitious wage claims to reap secure the protection and some their natural reward in terms fairly modest increase in real of rising unemployment. If this wages-or rather, since this is is the truth, then wage push is what matters to their members. the prime cause: but the tre- in real take-home pay. The mendous acceleration of wage essential point is that it is real claims in recent years—and not take-home pay, and not real only in this country—would wages, which seem to be the remain to be explained.

### Traumatic events

for the efforts of three econo- which roughly fitted the facts. mists who reported last week, highly suggestive.

main cause of inflation-or at any rate of wage increases-is excessive demand for labour, so that a high level of unemploy-suffered is tax-push rather than excessive demand for labour, so ment will check it, is not sup- wage-push inflation. ported by British experience at

cxercises have little or no explanatory powet.

The monetary thesis is so
The monetary thesis is so
fashionable that it is astonishing for independent of the monetary squeeze of that no proper model appears to able model of monetary infla
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The monetary thesis is so fashionable that it is astonishing the monetary infla
The Department itself is manufactures dlesel, engines brought about in part by expan
mission disclosure require
ments, because they are so include shareholders of 10 per include sharehol

that monetary excess is the both with common sense and issue: it is when they took account of taxes and other deductions that the economists found One must be grateful, then, that they had a statistical model

This is not a new finding—a in the Review of the National similar result was suggested by Institute of Economic and a Cambridge study by Professor Social Research, the result of H. A. Turner and others in 1972, their efforts to test the main and an OECD study in the same ruling theories against up-to- year drew attention to the date experience, including the tendency in all advanced traumatic events of 1974. While their review can hardly be de- to outrun growth, while the tax scribed as a comprehensive sur. burden on wages grew still vey, since only four basic faster (because as other sources theses were tested in a fairly of revenue, such as profits and simple form, their results are high incomes, were deduced, First, they claim that the so-called Phillips curve relation-ship, which suggests that the industrial wages (which has been ship, which suggests that the industrial wages (which has been banking organisations to pre-to banking organisations to pre-banking organisations to pre-to banking organisations to pre-to banking organisations to pre-pare for what they hope will be Department negative) which has strained

growing trade union militancy interests of its supporters is to through acquisition. or monopoly is responsible for make it possible to reduce taxes the worsening trend-a theory on wages, we will at last be on which would associate accelerat- the road to conquering inflation.

# Getting back in step in Ireland

IF THE terrorists who plague. On the British side, the irciand, both North and South, Secretary for Ulster, Mr. Merlyn are ever to be defeated, then Rees, has persisted with the a first requisite is that the Government's policy of trying to British and Irish governments not as provided in the Covernment's policy of trying to Bratish and Irish governments get as nearly as possible back about must work together. Over the to normal in Northern Ireland, past few years a closer under This has meant a refusal to economists standing of the need for co-react with any dramatic new operation at this level has been policies to the recent wave of developed, but last week the violence; it has also meant a evolving harmony was rudely dogged determination to ignore plexities of the system relating elevation into a top political disturbed when the European the temptation to try for a swift to economists employed by the job has produced an avalanche Commission on Human Rights coup against the new reduced Government, and also to the published a report that partly bands of terrorists. One by-proliferation in their numbers, upholds the Irish Government's product of that attitude has been 1. Remarkant 2 in 1081 shows the condition on Left Bank bookseller. upholds the Irish Government's product of that attitude has been complaints that torture or a series of Tory attacks on treatment " inflicted on some prisoners in John Biggs-Davison's speech on

### Old charge

The erritation of the British crimes) was the latest example. side at this resurrection of what The difficulty for the British adopting the more cautious severe crackdown.

The Irish Government's new U.K. approach anti-IRA legislation, antroduced at a time when peace rallies in This must be an unknown, and mond Barre, already established the word for Dubin and elsewhere have it does not seem likely that it lished as a leading economist, the job?

This must be an unknown, and provided as a leading economist, the job?

This must be an unknown, and provided as a leading economist, the job?

The job?

This must be an unknown, and provided as a leading economist, the job?

The job?

This must be an unknown, and provided as a leading economist, the job?

The job?

The job?

This must be an unknown, and provided as a leading economist, the job?

The job? ise antipathy towards terrorism. Intuser appears to be in waiting related to collect them. As his increase the legal weaponry for a new post in the forthcoming and President Gisbeen something to do with the hence the cast around for an collection grew he commissioned increase the legal weaponry for a new post in the formeom, and the commissioned available for use by a "law and ing Cabinet reshuffle. Yet the card d'Estaing at that time des- Church of Scotland, so it was in alternative and the emergence a local builder to add a loft to available for use by a "law and ing Cabinet reshuffle. Yet the Card of Estating France's greatest triguing to see the word crop up of "moderator."

his his his as "Moderator at the Meeting"

The choice for the job fell them. of a resolution declaring a appraisal of the British concerned, it has been a case of Government of the Republic of of England man, although he is weight of the accumulated national state of emergency, approach; this is of greater im- the job promoting the economist Zaire and representatives of an at pains to point out that in this thrones became too much for national state of emergency, approach this is of greater in-ting job photocologic recombination of the construction of the con The only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question that remains portance than the personality of rather than vice-versa. Since the only question to commer-situation in eacted purely as an the supporting root, which call banks acting as agents for individual. His own background lapsed. The moral of this story certain syndicated bank loans to made him an obvious choice is that people who live in grass since the has been involved in a houses shouldn't stow thrones. authorities to use its powers: as anny of an in the new approach published in the same always this is likely to be a (or a decision to carry on as sold more than 150,000 copies through ten editions, and its tricky matter of nor upsetting now) is not devised in close cothrough ten editions, and its through ten editions, and its through ten editions, and its through ten editions, and its that Zaire is up to 18 months governmental) negotiations over nicked up something like a in arrears on something the account of the story nicked up something like a in arrears on something the solutions. a fickie electorate.

was security policy, of which Mr. Northern Ireland five years ago. Saturday (which called for the shift of the hurden of proof to Bank of England.) those accused of terrorist

hidden by Whitehall; as a result hasie change in its keep-out-of-the action to challenge official now. there has been a distinct cooling trouble policy is that every mili-of relations between London and tary act in Northern Ireland has in the forecasting field. How Dublin. The damage may not be political consequences, on both much good it really does for lasting, but in Ireland such set-backs cannot easily be afforded, possible for Dublin. It may be clients is a matter for conjective, but it can be extremely even if they are temporary. This even if they are temporary. This sent state of public opinion, to good for the firms concerned: sign of an "advanced liberal more fundamental differences of more fundamental differences of on terrorism, yet, paradoxically. Phillips and Drew derive from society comes out at the end approach of the British and an overt British move in the regular radio appearances from of September. The President is the povernments are begin an overtiment of the promised to It sh governments are beginsame direction could change their economist Paul Nield, and understood to have promised
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their economist Paul Nield, and understood to have promised
their economist Paul Nield (Nield Nield frontically, these differences movement for peace is stronger through different means (the cause, But a small price to pay seem to place the Dublin than that, and perhaps the Data Stream computer gave if the book helps keep the left Government nearer to a hard situation has so changed that Hoare and Co. Govett a good at bay in the all-important 1978 line on terrorism, with Britain London could afford a more run before it was hived off), parliamentary elections.

potential power has been magni- demand that part of that re- living economist. fied several times by the passage shuffle must include a rehave little chance of success.

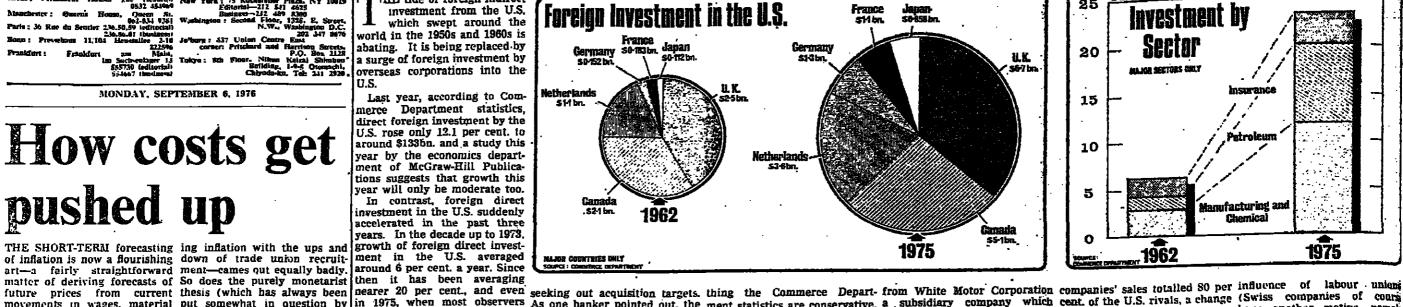
# The investment tide flows back

investment from the U.S. world in the 1950s and 1960s is abating. It is being replaced by a surge of foreign investment by overseas corporations into the

Last year, according to Commerce Department statistics. direct foreign investment by the U.S. rose only 12.1 per cent. to around \$133bn. and a study this year by the economics department of McGraw-Hill Publications suggests that growth this year will only be moderate too. In contrast, foreign direct investment in the U.S. suddenly accelerated in the past three years. In the decade up to 1973, growth of foreign direct investment in the U.S. averaged around 6 per cent. a year. Since

the Rabbit (known in Europe as the Golf). This decision is in itself a significant pointer as an example of a company with a strong export base in the U.S. (through the Beetle, whose sales have been declining) deciding on the creation of a manufac- a breakdown of foreign direct south of the U.S. turing plant.

The conviction that increas-



### **Proportion of** earnings

investment in the U.S. for some ing foreign investment in the figures are just as indicative of

playment (and correspondingly in the supporters that the what it calls its international proportion of this increase, Swiss electrical engineers, have The Commerce Department example, against what they see reflects a growing movement in the supporters that the what it calls its international proportion of this increase, Swiss electrical engineers, have The Commerce Department example, against what they see reflects a growing movement in the support of the commerce Department example, against what they see reflects a growing movement in the support of the commerce Department example, against what they see reflects a growing movement in the support of the commerce Department example, against what they see reflects a growing movement in the support of the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example, against what they see reflects a growing movement in the commerce Department example and the inds and productivity) wage larger spending programmes. If president, Mr. John Rose, which came from retained earnings. White Weld for Duncan Elector the acceleration in the early democratic) trends in Europe. and help them resist unwellow and price increases tend if any he can progress further, and is seeking out European com- By the end of 1975, the figure tric, the fourth largest U.S. 1970s the growth in the size Many U.S. bankers however takeovers whether by thing to accelerate convince Labour that the best panies which are looking to had come close to doubling electric meter producer. Again, and capabilities of foreign stress that their clients, particu-corporations or foreign that the best panies which are looking to had come close to doubling electric meter producer. Again, and capabilities of foreign-stress that their clients, particu-corporations or foreign to the theory that way in which it can serve the expand in the U.S. perhaps again reaching \$27bn., and total a rivel U.S. bid from Midland-based corporations. It points larly where the company is (Some states have special; it The investment banks too are large proportion in insurance around the corner.

in dollar terms, announcements and Hoffman-La Roche have plans in the U.S. are running 60 per cent. ahead of last year at some \$900m.

This figure excludes the state of this year, tries, Nestle, British Petroleum and all the world to choose from, it decided to buy the American Chain and Cable. Imperical Chemical Industries, too, is happening, but another to the Commerce Department mentions which bankers place great foreign affiliates account for emphasis upon has been the emphasis upon has been the trend in international exchange rates and labour costs. Thus the private wages and salaries and the grow's private wages and salaries and the grow's private wages and salaries and devaluation of the dollar in recording to the Commerce Department mentions which bankers place great. According to the Commerce Department mentions which bankers place great foreign affiliates account for this one thing to describe what the Commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department mentions which bankers place great foreign affiliates account for the commerce Department when the commerce Department when the commerce department when the commerce Department when the commerce depart

figures will be available.

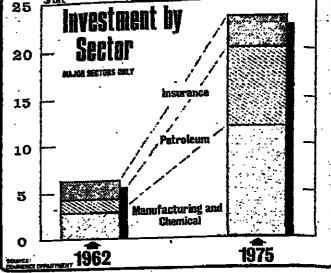
It is not necessary to rely entirely on subjective assessments of what may now be happening. The U.S. Conference mercial and financial ties. Companies to the U.S. Companies in particular. Hawker Siddeley, the bankers on Well Street agree own superior technology and areas such as South Caroling that the wave of immigrant continuous companies in particular. Hawker Siddeley, the British aviation group, has bought a 30 per cent, stake in Onan Corporation for \$37m.

When Babcock and Wilcox cate, especially among smaller to the U.S. to exploit their tyre manufacturer has done, in particular. Hawker Siddeley, the bankers on Well Street agree own superior technology and areas such as South Caroling that the wave of immigrant corporations is much stronger than these few examples would indicate the cate of the U.S. to exploit their tyre manufacturer has done, in particular. Hawker Siddeley, the bankers on Well Street agree own superior technology and areas such as South Caroling that the wave of immigrant corporations is much stronger than these few examples would indicate the cate of the U.S. to exploit their tyre manufacturer has done, in particular. Hawker Siddeley, the bankers on Well Street agree own superior technology and areas such as South Caroling that the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger.

The wave of immigrant corporations is much stronger than the wave of immigrant corporations is much stronger. happening. The U.S. Conference mercial and financial ties. Com-Board, an influential research panies such as the Shell Group, organisation with strong ties British American Tobacco, terests to the Shah of Persia, terests to the Shah of Persia, cases are keeping their invest-

shortly to announce important rich Opec countries.

Only this month St. Gobainwhich could be used to account As for the the activity in U.S. union's demands so strongh
Pont-a-Mousson, the French for foreign interest in the U.S. acquisition by foreigners over because it feared competition only wages could be attacked). It is the growth of the "social wage" (which has been enormous) rather than of real industrial wages (which has been lindustrial wages (which has been shuggish and straight and strai been sluggish, and recently a profitable new line of business, that total foreign direct invest-ducts group, which would give both numbers and wealth), an important influence. In the 1950s and 1960s many ment in the U.S. was \$7.6bn. it over 50 per cent. of the Other reasons which the Comof the biggest U.S. commercial The figures are based on the equity. Recently, too, the French merce Department points to as versial, and most widely cited that was apparent when ar banks such as Citibank were nominal value of equity invest- state oil company Elf-Aquitaine long-term factors include the explanation of the wave of invasion of Arab business opening foreign branches to ment plus net loans and re- tried and failed to get control U.S. "open door" policy to foreign immigrant corporations, interests was feared. Some service the U.S. corporations invested income and include of a U.S. chemical company, most business sectors (but not is political uncertainty in foreign companies wanting at



# the dollar

some \$900m.

This figure excludes the estimated \$250m. which Volkswagen of West Germany is planning to invest over the next couple of years in its first U.S.

manufacturing plant to build the Rottline its of 500 soin in the U.S. Rather like Babwater the target is the overseas sented in the U.S. Rather like Babits sice in in the U.S. Rather like Babcock it felt it was underrepresent foreign investment.

sentence it felt it was underrepresent foreign investment.

The most comprehensive and the rapid escalation of wage Its greatest significance on the other hand, which expansion in the U.S. which are well established to nine volumes) was recently countries on the other hand much faster than U.S. invest the Rather the target is the overseas sented in the U.S. Rather like Bablargest industrial corporations.
Rather the target is the overseas sented in the U.S. In relation to most European countries into the special investment.

The most comprehensive and the rapid escalation of wage Its greatest significance on the other hand, which expansion in the U.S. which are well established to nine volumes) was recently countries on the other hand much faster than U.S. invest on in the U.S. company with perhaps sales in its size (end its European competitions) like Hoechst and BASF which expansion in the U.S. which are well established to nine volumes) was recently countries on the order hand much faster than U.S. invest on the acceleration in devaluation of the dollar in recompetition to most European countries into the special investment.

The most comprehensive and the rapid escalation of wage Its greatest significance tries since 1971 on the one hand, the special investment.

The most comprehensive and the rapid escalation of the dollar in recompetition to most European countries in the growth of lation to most European countries on the order and the rapid escalation of the devaluation of the devaluat here). Thus it has interests in published by the U.S. Commerce made it more attractive to enter ment overall, and that it is confishore exploration consortia in Department, following a study the U.S. market. Most analyses centrated quite noticeably fi the Gulf of Mexico, has a 15 per sparked off by political fears suggest that U.S. labour costs certain business sectors. Thus cent. stake in a Chevron-led about foreign investment and are, per unit of production, no can be of national significance which has just won consortium which has just won the (perceived but unrealised) longer significantly higher than that a senior executive of the licences in the Atlantic threat of an invasion by newly in much of Europe and Japan, Universal, one of the companie lease sale and is expected threat of an invasion by newly in much of Europe and Japan, Univoyal, one of the companie and that labour costs, once a affected by the recent 16 wee The above diagrams give new plant programmes in the It would be impossible to barrier to U.S. operations, are rubber strike, claimed that the summarise all the reasons no longer perceived to be one, management was resisting the

any period since the war. In on the way

any period since the war. In recent years, it seems to have been turned upside down, so that at times of rising unembles of

assets of these companies (a Ross Industries could be just out that in 1964 the 200 largest family controlled have decided relating to foreigners.) The

small and U.S. investmen Another basic factor which abroad is probably four time

The investment banks too are large proportion in insurance around the corner.

The investment banks too are large proportion in insurance around the corner.

In on-U.S. corporations had sales to seek expansion in the U.S. no doubt either that comparatively canvassing in Europe and banking) was around GEC, one of Britain's largest of only 45 per cent. of the 200 partly because they are un-threatened by foreign taken for customers who want a U.S., \$174bn. at the end of 1974 industrial groups, expects to largest U.S. corporations. By happy about political trends in are ready to appeal the control of the 200 partly because they are un-threatened by foreign taken for customers who want a U.S., \$174bn. at the end of 1974 industrial groups, expects to largest U.S. corporations. By happy about political trends in are ready to appeal the control of the 200 largest non-U.S. Europe, or perhaps the chauvinism as a defence.

# **MEN AND MATTERS**

(Remember? in 1961 there were It is not unreasonable to

or are striving to catch up.

In France there is an inter-

quarter of a million pounds in royalties. (Commonly known as "Le Barre", the book is re-garded as the Gallic equivalent

of Samuelson's Economics.) Now there is every prospect A couple of weeks ago I was of a great deal more to come. moved to write about the com- Barre's sudden and unexpected

around a dozen under Sir Alec assume that some of the extra Carricross while now Whitehall customers are politicians and can boast 400-plus those at the unionists anxious to get some Prime Minister's inner thinking: This prompted a colleague to after all there is that famous point out that there is no but mysterious anti-inflationary monopoly on economists: stock "austerity" package awaiting now an old charge was not Government if it is to make any brokers too are getting in on France in a week or so from

All of which will be encour-

Since then, as far as Barre is between a delegation from the on G. J. MacGillivray—a Bank Inevitably, one day,

picked up something like a in arrears on certain foreign the past 10 years or so in what



Well, brothers, I suppose we have the Government to thank enabling so many of you to be here to-day."

organise a settlement (such course any day of the week." meetings are not uncommon between governments). However, therei s always the danger of acrimony creeping into such meetings and an impartial chair. A moral tale man is an obvious necessity. A newly crowned African chief plies perhaps rather more throne that he became obsessed

has become known as Paris Club." since that has usually been the venue for these meetings. He has helped in the restructuring or refinancing of loans for a number of govern ments during that time. including Chile, Argentina, and Indonesia.

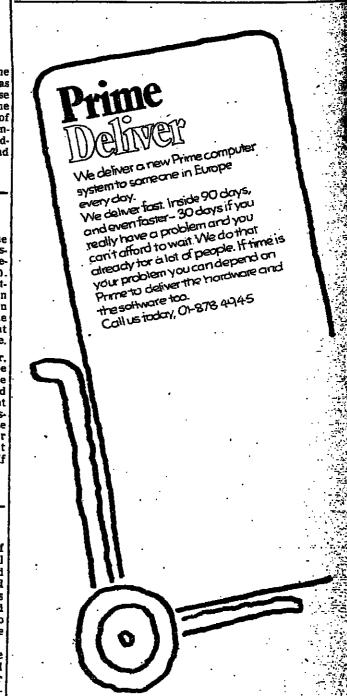
### Touche

This story is supposed to be true (although I have a sneaking sus picion that I have heard some thing in similar vein before). A friend claims that while wait ng to get on to the first tee on a local municipal golf course on a recent Sunday afternoon he turned round to discover that the vicar was next in the queue

Jocularly he asked the vicar, "Isn't it a sin for you to be playing golf on a Sunday?" The vicar smiled tolerantly, but said nothing until my friend hit what could most favourably be described as an unremarkable drive currency loans and for perhaps off the first tee. Then the vicar the first time the commercial quietly remarked, "My son, it sector got together to try and is a sin for you to be on a golf

However, the word chairman im- was so impressed with his tribal his hut where he could store

Observer



PRIME Prime Computer (UK) Ltd 34-36 Bromham Road Bedford MK40 2QD The Cooch House 173 Sneen Lane London SiV14 8NA



هكذامن الكمها.

This week's Farnborough Air Show will herald a new era in aviation. Heavy purchases of civil and military products are anticipated world-wide in the years ahead, but the scene will also be dominated by changing political, economic and sociological requirements, and fresh patterns of international collaboration will emerge

the increasing urgent need to increasingly so. settle future work programmes While much of that future is

promising. kinds has been forecast at passing the U.K. by: \$46bn. (about £25bn.) or about It is against this background 3,000 aircraft by 1985. The that the two big issues dominat-military market up to 1990 is ing the U.K. industry must be

won in the EEC countries 1990s. alone, with several times that volume of business likely to be Interrelated available worndwine. In the street wo issues are closely before the end of this year, industry that such a step could of the peripheral existing ample of this is to be seen in market up to 1985 has been interrelated, if only because the with Vesting Day likely to be cause further serious unsettle. factories and airfields as the the plans under discussion for available worldwide. In the

on the civil side, is all the more only likely to be secured by a worrying for those in the in-policy of extensive international dustry because at no previous collaboration, the U.K. industry time has the long-term outlook itself has to achieve any refor world aviation been so organisation swiftly, so as to be in the best position to nego-With the world moving out of thate sensible and beneficial the industrial recession of the collaborative ventures. Delays past three years, virtually every in establishing the new inanalysis of future world dustrial structure that will be aviation markets is optimistic necessary could result in many.

The market for airliners of all of the new re-equipment tides

> port and other types of aircraft future civil work programmes Scottish Aviation is still moving For this reason, Opposition What does seem clear, however, it has been estimated that more upon which much of the through Parliament. While it statements that it would be the is that eventually the existing clusion, for example, that even than £1bn, of business over the industry will depend through man 2101 or outsiness over the industry will depend into the Bill could be defeated or sub-servative administration to military aircraft and guided big civil aviation centres that

estimated at up to 23,000 air-Government, on acquiring set for some time in the New ment at a time when the basic industry's overall work-load the closure of the BAC's Flight reaft of all kinds, of which ownership of the industry, Year.

Test Centre at Fairford about 15,000 will be military would then become directly and the rest civil, at an esti responsible for approving and has been bitterly contested in development and production of be borne in mind that some kind. On the military side, the U.K. mated cost of about £10bn. Sinancing the industry's future Parliament, and that some new ventures can proceed, so of rationalisation would be industry is exceptionally busy.

BRITAIN'S AEROSPACE in The fittire for world aviation civil work-load. It has to be senior management and share as to re-establish the industry's almost certain to occur in the Full production has been is the injection of one or more dustry goes to this year's at all levels seems therefore to accepted that, even if holders of the companies in long-term position in expanding industry even if the nationalisa- authorised on the Tornado new civil programmes. These farmborough International Air be secure. The major objective nationalisation were at this late volved have spoken out strongly world markets.

The fitting for world aviation civil work-load. It has to be senior management and share as to re-establish the industry's almost certain to occur in the Full production has been is the injection of one or more dustry goes to this year's at all levels seems therefore to accepted that, even if holders of the companies in-long-term position in expanding industry even if the nationalisa- authorised combat aircraft; there could perhaps include a transfer of the plant of the HS.145. Show in a more uncertain mod for the U.K. industry must be stage to be defeated politically, against it, there now appears to Just what shape the reorganithan at any previous time. This to ensure that it gets at least both from the impending This is not going to be easy, in financing any future new way. Even at middle manage- clear. Lord Beswick, the chair- of aerospace activities. As that trainer, and the Maritime programme on a new mediumnationalisation of the industry for the competition is already civil ventures, because of the ment levels, earlier opposition man of the British Aerospace work-load declines—as it seems Harrier is under development, range airliner, such as the such (which is bound to result in formidable from the big U.S. industry's lack of funds to appears to have given way in Organising Committee, has likely to do, if only because with the prospect of a new pro- gested B-10 derivative of the substantial reorganisation), and manufacturers, and is becoming undertake such financing for many cases to an acceptance of said that he intends to favour such new civil programmes as gramme with the U.S. on the A-300 Airbus, or some entirely

the likelihood of State owner- a broad measure of decentrali- are undertaken will be on an AVS-B Harrier, and an eventual new venture emerging from the

Jaguar-Harrier replacement also many studies being conducted

civil programmes are either running down (for example the ference in the U.K. would supersonic airliner ng on a comparatively low level of orders. While work on Airbus wings remains high, the Hawker Siddeley Trident line is now dependent upon the out-standing aircraft being built for a minority (40 per cent ) of the the Civil Aviation Administra- airframe tion of China, and BAC Onemilitary market up to 1990-is ing the U.K. industry must be
estimated to amount to some viewed; the need now to settle
estimated to amount to some viewed; worth as swiftly as: possible the
6.000 combat aircraft, worth as swiftly as: possible the
around \$200m.

Inc. that the two dig issues domination of China, and BAC Oneothers, apart from French and
U.S. companies, appears at least
itself is concerned, the Government of headquarters handling the long-rather, than a "go it alone," sustained with the aid of a
for the time heavy to head
around \$200m. with a continued steady sale of persist with their plan, the Hawker HS-748s and HS-125 whole concept of European colexecutive jets.

Sales of the Britten-Norman to, could founder. Islander and Trislander remain high, and those of the Short Prudent Skyvan and its new SD3-30

Commuter airliner can be con-

by various groups or individual manufacturers, both in the UK., While the immediate preappear to be for some collaborative venture with seeking undaterally to develop the Mercure 200 short-toa minority (40 per cent.) of the

laboration as envisaged bither-

ir would appear sidered reasonable in present prudent at this time for the economic circumstances.

U.K. industry to look more But there can be no doubt closely at the possibilities of at Fairford, that what the U.K. industry participating, preferably with needs more than anything else some significant design

CONTINUED ON NEXT PAGE

# World outlook bright

By Michael Donne, Aerospace Correspondent

Despite the fact that the Bill within which the

design,

it will reach the Statute Book believed by many in the basic activity, supported by such without some surgery. An ex-

In this context, it must also Gloucestershire.

around £30bn. question of future ownership—British Aircraft Corporation, wise delay the vital issue of industry, and day-to-day lities, including factories and company vigorously seeks new ing the B-10 short-to-medium orders. In the smaller aircraft haul derivative of the Airbus.

Even in the "general the nationalisation of the Hawker Siddeley Dynamics and future.

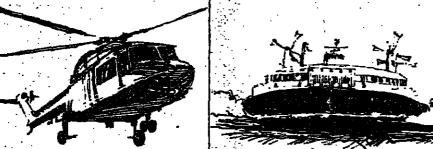
To the companies themselves, seems also likely to decline.

Scottish Aviation is still moving. day-to-day lities, including factories and company vigorously seeks new

> is still always possible that the intention of any future Con- pattern of several civil airframe, without nationalisation the two stantially amended in the House denationalise the industry have weapons and space centres will have been built up by Hawker of Lords, there now seems to been greeted with some con- be nationalised, with perhaps Siddeley Aviation and BAC be a strengthening belief that cern in the industry. It is only one major centre for each would find it difficult to survive

On the military side, the U.K.

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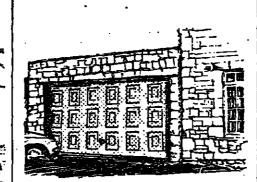


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Experimental & Electronic Laboratorie British Hovercraft Corporation. East Cowes, Isle of Wight, England.

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# Outlook

CONTINUED FROM PREVIOUS PAGE

finance.

in some sections of the U.K. ment, industry to speak disparagingly of becoming "mere sub-contractors" to the U.S. industry. But the fact remains that in a grammes is illustrated most designs and cash, especially on the civil side, any kind of work the civil side, any kind of work Over recent years, the trend is necessary for long-term has been for exports to rise survival. While the number of to new peaks annually culminational that will new types of aircraft that will ing in last year's performance emerge in the future may be of over £800m. and nearly limited, it is likely that the £450m, in the first six months numbers that will be built of of this year. While inflation has each type will be substantial, played its part in boosting As a result, major sub-contract- these figures, it also reflects ing programmes are likely to the industry's success in selling he available for a long time its wares overseas against conahead.

While undoubtedly in any discussions with the U.S. the do contain an extraordinarily U.K. should strive to achieve high content for spares £160m

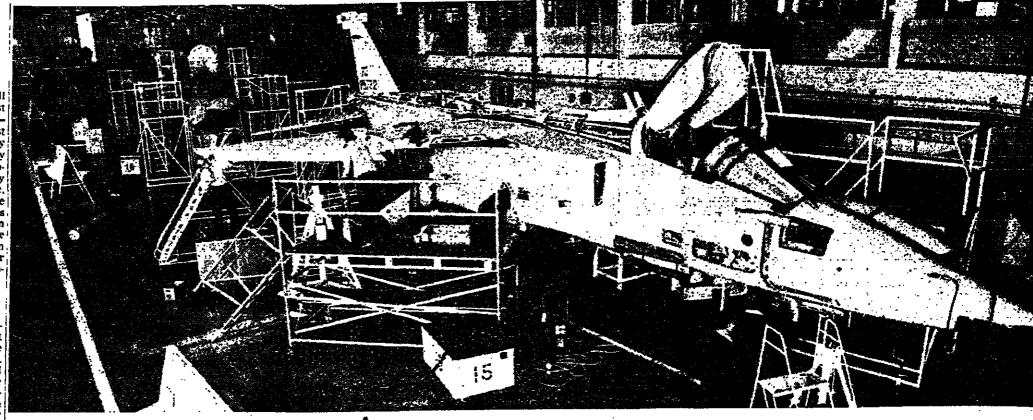
### Strive

development responsibility, in itself is prepared to finance all the production of one or more or the major part of the cost of the new aeroplanes now of any new civil ventureswhich seems unlikely-it must These include a wide range be admitted that the U.K. is only of types—the Boeing 7X7 likely to secure a minority family of jets, including a stake in the design, developmedium-range type, the 7N7 ment and production of any variant of the short-haul 737 new international civil venture, jet, and the McDonnell Douglas even one that it may initiate DC-X-200-and the U.S. manufacturers themselves have made a result, any kind of aviation facturers themselves have made work the U.K. can get in future no secret of their desire to attract overseas partners and if it is sub-contractual rather It has long been fashionable than basic design and develop-

This need for new civil protinually stiffening competition.

At the same time, the figures

some kind of design and on aircraft and £140m. on



Assembly of the Anglo-French Jaguar at the British Aircraft Corporation's Weybridge works.

# International collab oration

sales in the current figures does the recession of the past three big market for 747s, 707s, 727s at a very low level.

responsibility, engines (including overhauls) OVER THE past year or so, the production. Unless new orders been cut back even more expected (57 aircraft bought or direct cost of doing so is high, for a 200-220 scater, with shall injections it is a continuous to the involving some payload penals range of 2.500 miles or more

matching the cash injections it is prepared to make, subcontract work should not be despised. For even this will help to keep ployed, and to maintain contacts with the world aviation. The successfully is prepared to make, and beyond, and to maintain contacts with the world aviation for the industry's scene, against the time when is prepared to make, subcontract work should not be developed for the 1980s are not come in soon at a greater rate drastically, as new orders for on option), but even so the first six months of this aerospace industries of both the come in soon at a greater rate drastically, as new orders for on option), but even so the involving some payload penaltange of 2,500 miles or more expected (57 aircraft bought or direct cost of doing so is high. for a zou-zou scater, with the first six months of this aerospace industries of both the come in soon at a greater rate drastically, as new orders for on option), but even so the first six months of this in the first six months of this aerospace industries of both the come in soon at a greater rate drastically, as new orders for on option), but even so the first six months of this in the first six months of this aerospace industries of both the come in soon at a greater rate drastically, as new orders for on option), but even so the first six months of this in the first six months of this in the first six months of the first six ployed, and to maintain contacts with the world aviation scene, against the time when indigenous ventures can again be prepared, with which to attack world markets.

In the U.S., Boeing, the big- by a continued steady flow of scene, against the time when independent ventures can again be prepared, with which to attack world markets.

In the U.S., Boeing, the big- by a continued steady flow of scene, against the time when independent ventures can again be prepared, with which to attack world markets.

In the U.S., Boeing, the big- by a continued steady flow of scene, against the time when independent ventures can again with the very scene, against the time when independent ventures can again be prepared, with which to attack world markets.

In the U.S., Boeing, the big- by a continued steady flow of scene, against the time when international industrial patterns gest jet transport builder in the orders for its DC-9 short-haul continue steadily, but those for new equipment.

This is especially so because the whatever the airlines buy now whatever the airlines buy now of some 100 or more schedule and the very scene, against the time when international industrial patterns gest jet transport builder in the orders for its DC-9 short-haul continue steadily, but those for new equipment.

This is especially so because the whatever the airlines buy now of some 100 or more schedule and the very scene again, the very scene again, as the liner are exceptionally slow. In the U.S., Boeing, the big- by a continued steady flow of international industrial patterns gest jet transport builder in the orders for its DC-9 short-haul continue steadily, but those for new equipment.

This is especially so because the liner are exceptionally slow. In the U.S. Boeing, the big- by a continue steadily, but those for new equipment.

This is especially so because the liner are exceptionally slow. In the U.S. Boeing, the big- by a continue steadily, but those for its DC-9 short-haul continue steadily, but those for its DC-9 short-haul continue sales in the current agures does wears, only comparatively few of and 737s it has secured a bigger In Europe, the situation is In the U.K., the Fairey Britten through to the early 1990s and almost as many ideas as to be reflect the fact that many of years, only comparatively rew of and 73/8 it has secured a bigger. In Europe, the situation is Norman Islander and Trislander the existing civil programmes the world's airlines have share than anyone else of the worse. The A-300 Airbus has Norman Islander and Trislander perhaps even to the end of this to meet them.

This fact of aerospace life are running down, and that new wanted to buy new equipment, orders that have been available, been doing better in the battle continues to sell well, while a returning down, and that new wanted to buy new equipment, orders that have been available, been doing better in the battle continues small flow of orders continues for the short Skyvan, the short Skyvan t

executive jet. It is hoped that ability and fuel efficiency—in in the U.S. and Europe on he more orders will emerge soon turn resulting in demand for to meet those needs. Again, for the new Short SD3-30 "Com- new designs.

But there have been no new orders for the Hawker Siddeley Trident beyond those from to as much as \$46bn. (in closely knit European co China, while BAC's One-Eleven line is currently sustained £25bn, through to 1985, effect compete with the U.S. giant solely by a small order from tively resulting in a market for while the U.S. companies Tarom of Romania and the manufacture of five additional

### Concorde

In both France and the U.K. moreover. Concorde work is field, \$23.1bn. in the mediumrunning down fast, with eight
of the 16 production aircraft
now built and flying, and work

\$2bn. in the freighter field. Filton and four at Toulouse) by the two Govern-

expansion by then will be seen still be able to produce their to be well established, and individual designs. therefore likely to continue through the 1980s.

This, in turn, as expected to help the airlines overcome much the over-capacity situation too many seats chasing too few passengers) that has plagued them for a long time, often stemming from the substantial take the ventures envisaged. fleets of wide-bodied jets they ver-ordered before the recession began. It seems likely, Recognised therefore, that the airlines over the next year or so will start to the look more eagerly for addi-broadly to have recognised that tional aircraft with which to the bulk of the future market

regulations, particularly relating loads of 200 (or even fewer) to noise, that can be expected passengers.

rising fuel costs and the need turer. Boeing, in its studies to preserve as much as possible of future markets, has estimated declining fuel reserves, will also that by far the largest share of dictate the purchase of new the airlines' new aircraft fleets. While it is already pos- requirements will be in thissible to modify many of these area. older jets to comply with the Three categories of aircraft

must be accepted if the U.K. ventures will be needed to keep so the manufacturers' order But while even Boeing has had for orders against the mediumindustry wants to survive, the factories fully occupied in books have shrunk considerably, to lower its production rates, range models of the DC-10 and the U.K. ventures will be needed to keep so the manufacturers' order But while even Boeing has had for orders against the mediumfor the short Skyvan, the beyond to-day's models in terms tinuous discussions between the short of both environmental accept- various aircraft manufacturer

The last the U.K. ventures will be needed to keep so the manufacturers' order But while even Boeing has had for orders against the mediumfor the short Skyvan, the beyond to-day's models in terms tinuous discussions between the short of the short

of the anticipated world market, facturers and their governmen suggested that it might amount to want to see some more constant 1975 dollars), or about sortium emerging with which about 3,000 aeroplanes. Of this turn have been anxious to ensur market, it suggested that about that the formation of such a aircraft. with Government \$20bn. would be the replace- organisation does not cut the ment of existing ageing jets, off from their erstwhile lucr with the remaining \$26bn, being tive markets on this side of the new purchases to meet the Atlantic. The pattern of negsteady growth of air traffic. It tiations has probably been mor further analysed the market as complex than at any previou to \$13.6bn. in the long-range time in the history of air tran

With this kind of market at well advanced. There is no stake, the search is on in the Earlier efforts by the immediate prospect of addi world's aerospace industries for of Seven in Europe (compris

ments until the outstanding air- development and manufacture, Fokker. Dornier. Aerospa craft are sold, and additional it is certain that there will be and Dassault-Breguet) in airline orders emerge to justify fewer competing designs than in medium-range jet, together new financial commitments. the past, and that each design ideas that the U.K. might There are signs, however, will be built by an international ticipate in a B-10 sho that the demand situation is consortium rather than an indi-medium haul derivative of the changing, and it is hoped that, vidual manufacturer. The days A-300 Airbus, appear to hav before the next 18 months are of each aircraft industry in each been temporarily upset by th out, some major new pro country producing competing unilateral French proposal & grammes will be moving from designs to meet the same a Mercure 200 airliner, but the project offices, onto the fac- requirement are over. Collabora- 45 per cent. by France, 15 per tion on an international basis cent. by McDonnell Dougla One of the most significant is the essential prerequisite for and 40 per cent, by other comsigns is that, with the ending the manufacture of major new of the recession, world air traf civil airliners, although at the fic is picking up again, and is ex. smaller end of the scale, in the pected to grow at an average business and executive aircraft annual rate of around 8 per fields, for example, and even cent. at least until 1981. Be. perhaps in the short haul feederyond that, the airline observers liner business, where developare too cautious to predict, but ment costs are lower, some indithe general belief is that the vidual manufacturers may well

As a result of this situation, however, the search for the new designs to meet the major airlines' requirements is being accompanied by an equally complex pattern of discussions among manufacturers to find the most politically and economic-

As Boeing's analysis shows, meet the anticipated expansion will lie in the short to mediumin world air traffic. Some are range fields. The very long-already back in the market for range and medium-to-long range markets are already dominated At the same time, many of to such an extent by the Boeing the airlines will also be looking 747 and its variants (such as for replacement aircraft for the SP Special Performance those parts of their fleets that model), and the McDonnell will be ageing. In many cases. Douglas DC-10 and Lockheed airlines have fleets of long-haul TriStar tri-jets and their long-Boeing 707s or Douglas DC-8s, range variants, that no other medium-haul Boeing 727s and manufacturer in the Western short-haul Boeing 737s, Dougias world now wants to waste time DC9s, BAC One-Elevens and and money in getting into these other jets that have been in fields. The only possible excepservice for many years. By the tion to this situation would early 1980s, many of these air- appear to be a requirement for craft will be 15 to 20 years of a small number of very long-age. They will also need range aeroplanes, capable, say. replacing because of the increas-of 7,000 to 8,000 miles range ingly stringent environmental but with comparatively low pay-

In the short-to-medium mar-The need for increased fuel kets, however, a big future next generations of civil aircraft. fficiency, stemming both from awaits the successful manufac-

stricter noise regulations, the appear to be emerging. One is

broad terms, the tendency h Boeing, in a recent analysis been for the European man

being the new designs for the future. BAC, Hawker Siddeley, Mess Because of the high costs of schmitt-Bolkow-Blohm,

Few in Europe appear have welcomed this proposi which is seen as cutting sharply across the earlier plan for tighter European co-oper tion already proposed. It still subject to detailed discusions, and may yet be eithe substantially modified or eve drupped.

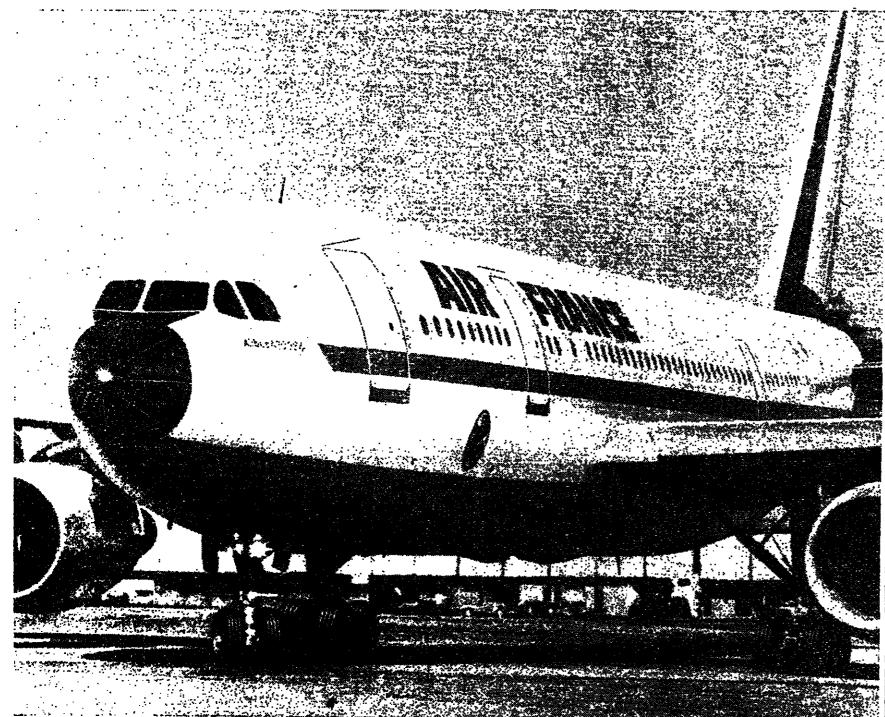
One by-product of this French unilateral decision, however may be to force the U.K. an other European manufacturer closer together, while it migh even result in Boeing of the U.S. itself moving to pre-emp the situation by signing part nership deals with Europea companies, including those i Britain, a prospect that many i the U.K. are beginning to fin

increasingly attractive. Overshadowing these U.K ideas has been, of course, the uncertainty over the impending nationalisation of the main ele ments of the British aerospace industry-although to be fair has been stressed all along the Organising Committee for British Aerospace that the indus try should not allow nationalisa tion to impede the flow o discussions on what to do next and how and with whom to d

maelstrom of national activity shows no sign of abating.

Nothing has yet been settle Indeed, it is probable that a this year's Farnborough a show the inter-company and international lobbying will be continuing in the chalets over looking the sirfield. It may be some months yet before any clear strands emerge from the tangled skein of planning the All that is clear so far is that one era of civil aviation deve lopment is coming to an end. while the one which is being shaped to take its place will prevail through to the 1990s and probably well into the next

Michael Donne



# Airbus A300. Bankers appreciate it. Passengers love it. Airlines profit from it.

To most airline operators the technical advantages of the Airbus A300 are indisputable. And to passengers its wide-bodied comfort and remarkable quietness have an immediate appeal. But the argument for the A300 is most persuasive if you're concerned with the money side of the

Its development—incorporating the latest technological advances in aeronautical research—took place before today's soaring inflation. Which

It costs less to run per passenger mile than older, fuel-gulping jets still in service. This, combined with its vast cargo capacity, means it can make profits on lower passenger loads.

> **@Airbus A300** Airbus industrie, 31700 Toulouse, France.

The A300. The answer to today's and tomorrow's economic realities.

تكناهن الأصل

# Crucial period for Concorde

profitable for the airlines, and at the earliest possible date. when further orders will be It does not seem likely that received for the five aircraft there will be any early settlethat remain to be sold out of ment of the problems confront-

authorised in the not too making slow progress.

Authority).

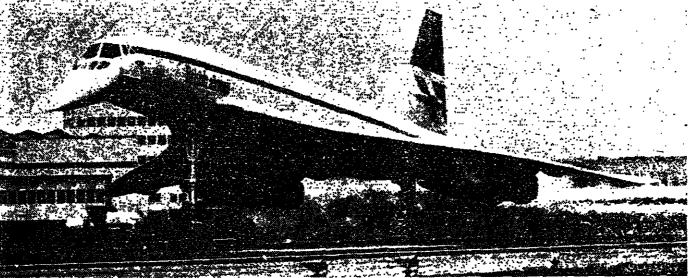
between London and Paris, and this year. Washington are described by both airlines as excellent, run- Complex between Paris and Rio de reluctance by the Indian Gov- from Concorde.

few complaints about the terms of time, and of payload, materialised.

WITH. THE Anglo-French 20 per cent surcharge on the Concorde having accumulated normal first-class fare that is over seven months of airline charged for Concorde service. service with British Airways From these preliminary results, and Air France, it can reason the two airlines have concluded ably be claimed that the super- that there is undoubtedly a sonic era is here to stay. What market for supersonic air travel, still remains to be established, and that for this reason the however, is to what extent immediate priority must be the Concords operations will be expansion of the route network

the 16 production aeroplanes ing Concorde operations into originally authorised by the two and out of Kennedy Airport New York-the earliest date by Beyond this, two further which the two airlines appear questions still to be answered to believe they can start services are whether there will be being early in 1977—but New further production orders for york nonetheless is likely to be the present generation Con the next major route develop-corde and whether a second ment, if only because negotia-generation aeroplane will be tions for other routes are also

So far, both British Airways So far as BA is concerned, and Air France express them after New York the emphasis selves well satisfied with the tive route of all, the North Address. The weaker the case for the route of all, the North Atlantic between New and London, pending a satis-



Concorde Alpha-Alpha of British Airways landing at Heathrow on the return leg of its maiden service flight

factory settlement of the are the need to improve the from 14 hours 15 minutes to Once a Concorde service to mental operating data that is tion. Load factors on the routes expected to be completed later represents a diminution of Convices to Hong Kong, for ing airline pattern with setween London and Paris and this year.

Load factors on the routes expected to be completed later represents a diminution of Convices to Hong Kong, for ing airline pattern with setween London and Paris and this year.

Secretary of Transportation, has the aircraft is worth having, years away at least, if only he said that this must be some 10 to 15 secretary of Transportation, has the aircraft is worth having as expected, competitor airlines duced in 1977. Flights to Tokyo said the trial there is adequate the demands of new suboth airlines as excellent runservices on the route with however, owing to the continued

evidence that Concorde is too models authorised can be disserviced available government

services on the route with however, owing to the continued

evidence that Concorde is too models authorised can be disserviced available government

a high level of forward book
The Indian situation is more Boeing 747 long-range aircraft objections to supersonic air. For this reason, the current noisy or otherwise deleterious posed of. Whether these air ments on available government

Paris and Caracas marginally U.K. Government itself has not can be made to Concorde to Also now in the negotiating of considerable significance, to be any reason to believe that capital cost of buying them, with the aerospace industries on satisfactory, and reasonably yet approved a supersonic corri-improve its payload-range per-stage are Concorde rights across. The outcome of this extended this is likely to happen. While remains to be seen. acceptable between London and dor over the U.K. This is due to formance on this route tone be- the Soviet Union, via Novo- period of study into all aspects initially the noise readings at Certainly, at £30m, a time, ing forces, and with all their Bahrain. BA has so far carried concern by the Indian Govern- ing to move the centre of gravity sibirsk, to Tokyo. Clearly, such of Concorde's operation will Washington's Dulles Airport few airlines can afford them, governments also involved over 7,000 passengers on its ment over sonic boom, but there of the aeroplane aft so as to en-flights cannot start until clear- eventually determine whether were comparatively high, this and there is growing pressure (since no individual company or concorde flights.

Concorde flights.

The state of the aeroplane aft so as to en-flights cannot start until clear- eventually determine whether were comparatively high, this and there is growing pressure (since no individual company or its also the question of what the able the existing tanks to carry ance is received both at Tokyo or not the aircraft can fly into was attributed to lack of famili- on the U.K. and French Govern- group of companies could afford The level of customer U.K. can offer India in return more fuel), but even so, the and from the Soviet Union. The other citles in the U.S. The Jevel of customer U.K. can offer India in return more fuel), but even so, the and from the Soviet Union. The second appreciation has been high, for Concorde flights. Super- most desirable solution must former depends upon the But it is also likely to be ing procedures, and as experi- of leasing scheme that would likely, therefore, both that with considerable favourable sonic overflying of the Indian still be the supersonic corridor Japanese attitudes to the taken as a yardstick against ence has developed, so have the enable groups of airlines or Concorde and the Soviet TU-144 comment about the substantial sub-continent is highly desir- across India.

environmental situation, while which the attitudes of other pilot's skills in operating the even individual operators to get (which has not yet entered farc-

serves wen sausned win the results of their Concorde operations. This is despite the fact that neither airline has yet been able to introduce been able to introduce the fact concorde operations are the fact that neither airline has given its approach for Concorde operations of the fact that neither airline has yet been able to introduce the fact of their Concorde operations of the fact this situation will be fact this situation will be for this operation can be given at this time. The best must certainly convince other to agree that some time in be given at this time. The best must certainly convince other to agree the fact this situation will be for this operation can be given at this time. The best must certainly convince other to agree the fact this situation will be for this operation can be given at this time. The best must certainly convince other to agree the fact this situation will be given at this time. The best must certainly convince other to agree the fact this situation will be given at this time. The best must certainly convince other to agree the fact this situation will be given at this time. The best must certainly convince other to agree the fact this situation will be given at this time. The best must certainly convince other to agree the fact this situation will be given at this time. The best must certainly convince other to agree the fact through. that neither airline has yet has given its approval for Conbeen able to introduce operations into Tulla. It has been suggested, for exConcorde on to the most lucraconde on to the most lucrathat neither airline has yet has given its approval for Conbeen able to introduce operations into Tulla. It has been suggested, for exconde operations into Tulla. It has been suggested, for exlight operation can be prefer to avoid if it could.

Settled, and that some time in be given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to be given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to be given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to be given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to that can be hoped for is that as governments in South America.

South and the can be hoped for is that as governments in South America. The weaker the case for the constitution will be given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to settled, and that some time in the given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to settled, and that some time in the given at this time. The best must certainly convince other damaging as has been claimed, to accept Concorde flights to accept C

months will be crucial for the acceptable, the future of supercurrent legal arguments on this runway at Singapore, and the about 17 hours if the more Singapore can be established, accumulated will go a long way. It is probable, however, that
current legal arguments on this runway at Singapore, and the about 17 hours if the more Singapore can be established, accumulated will go a long way. It is probable, however, that
concorde. In that time it sonic civil aviation, at least in
should be able to demonstrate should be able to demonstrate the control of th imposed, on sonic overflying rights en route though this would still be sub- and the Pacific basin becomes other countries that the aero- 1977, when the 16 months' U.S. to oil that it is an acceptable the shape of Concorde, will be erations at between Bahrain and Singapore, stantilly better than the cur- available to the supersonic air- plane is not the fearsome trial is planned to end, the acceptable to the world's air trans.

There requires the current of the supersonic air plane is not the fearsome trial is planned to end, the acceptable to the world's air trans.

There requires the current of the supersonic air plane is not the fearsome trial is planned to end, the acceptable to the world's air trans.

There requires the current of the supersonic air plane is not the fearsome trial is planned to end, the acceptable to the world's air trans. Concurred operations at Work is now in progress on the rent 23 hours 25 minutes taken liner, either on BA's own oper-monster that it has been claimed ceptability or otherwise of port network in both economic There remains the question of Kennedy International Airport Singapore runway, Including by subsonic jets, every minute ations or on a leasing basis in to be, but just another aero-Concorde will have been established beyond another on a leasing basis in to be, but just another aero-Concorde will have been established beyond another length on the supersonic time the first of the supersonic time lengthening it, and this is added to the supersonic time the fleets of other airlines. Ser. plane that can fit into the exist-lished beyond question—for Mr. in turn should convince a num. plane. At present, it seems that

ings, while on the route complex, for it stems from a in a battle to keep traffic away liners by the environmental 46 months' trial of Concorde in to the environment, he will not craft will be sold outright to and industry resources. Morelobbies in Japan, especially the U.S., which officially began hesitate to cancel its right to interested airlines, or whether over, any such development Janeiro they are exceptionally ernment to permit supersonic. There is a possibility that among communities which sur- with the first Concorde flights fly into Washington. good, on the route between overflying at a time when the some technical improvements round Haneda Airport in Tokyo. to Washington last May 24, is So far, there does not appear because of the high initial nationally collaborative venture.

savings in time achieved by able. While British Airways These discussions on Indian the latter depends upon the pro- countries will be determined aircraft in accordance with local into the supersonic cra.

paying passenger service) will supersonic flight, and the com- could, at a pinch, fly round the over-flying rights have been gress made with the Soviet Final acceptance of the aircraft noise abatement procedures. At This is important, because have the field to themselves for parative freshness of the southern tip of the Continent, under way throughout this sum- Union's own TU-144—for clearly by the U.S. at the end of the 16 the same time, however, the upon how the two Governments some considerable time to come, passengers on arrival, with only this would add a penalty in mer, but no results have yet that country will not allow months' trial will not only make monitoring programme de- dispose of their remaining airtrans-Siberian Concorde flights possible the start of services to signed to show whether or not craft depends whether or not

Concorde is damaging the en- any more are built of the vironment-tor example, by so present generation, and whether reducing the ozone level as to or not money is forthcoming for permit an increase in ultra- the development of an advanced, violet radiation on earth-still second-generation arreraft. Cerhas to produce conclusive re-tainly, no further funds for sults one way or another.

France and British Airways But this in turn implies a prohave every reason to he con- gressive rundown of the producfident that the 16 months' trial tion programme, which has will be followed by a clean already reached the point where certificate of operational health workers are being laid off or from the U.S. Government.

It is hoped that long before duction Jines in Toulouse and then, however, the current legal problems that are preventing Perform services to and from New York Perform will have been solved, and that at least some token passenger

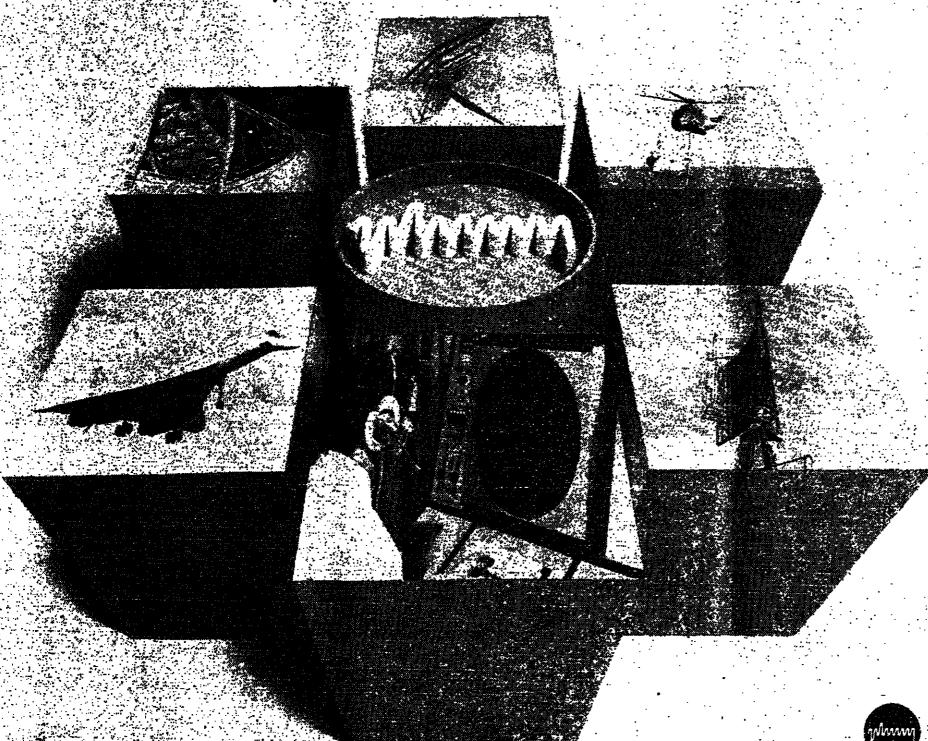
months will be crucial for the uneconomic, and socially un-Concorde. In that time it acceptable, the future of superthey will have to be leased would have to be an inter-

arity by pilots with the operat-ments to introduce some form the cash involved). It seems

Concorde production are likely So far, however, both Air until orders are forthcoming. are otherwise leaving the pro-

Everything, therefore, deservices will be in operation, pends upon how well Concorde Again, much influence on the continues to perform in opera-New York situation is likely to tional service over the next few be exerted by the results of the months. If at proves to be Washington monitoring pri-gramme—which are being pub-able, other airlines may be lished on a monthly basis by the stimulated to buy or lease. This U.S. Department of Transporta- in turn will make not only the demand for the aeroplane. If, Thus the next six to 12 however, Concorde proves to be

# The Plessey contribution to aerospace is many-sided



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Experience puts us far ahead in the development of many advanced technology products.

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# AEROSPACE IV

# The next generation of aero-engines

that will require a new genera- needs tion of engines.

able of producing power-plants smaller 100-seater transports that will meet the increasingly that are envisaged for the stringent noise regulations and future, together with military equally tough demands for aircraft and heavy helicopters, greater fuel-efficiency, that will At present, Rolls-Royce is still

engine now extends well over 20 years, because the soaring World market cost of any "new technology" power-plant is so high that it field that the biggest commertakes that length of time to recial engine battle of the future coup the development costs is expected to lie, since the and earn profits.

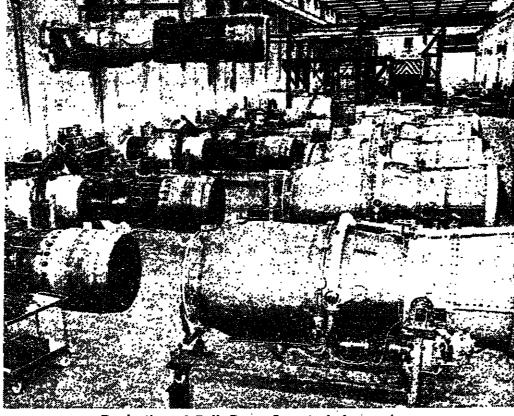
At the same time, these same medium high development costs are expected to account for about making it virtually impossible half the total world market of for any one manufacturer to some \$46bn for airliners of all undertake a major engine de- types through to 1985, with velopment on his own, so that further substantial sales beyond international collaboration is that. becoming the accepted rule in Various estimates have been

while markets for individual to be in the short to mediumsuccessful engines are likely to range categories. Since each

IN THE aero-engine field, as the 1980s, it is possible that in the civil airframes industry, smaller-thrust derivatives of the manufacturers' minds are these big-thrust engines may be dominated by thoughts of the developed while another pos-big markets that lie ahead for of smaller engines may also a new generation of airliners, emerge, depending entirely on especially in the short-range what size of aircraft the airand medium-range categories, lines choose to suit their future

In the short-range field, Rolls-In fact, these new airline Royce has developed the new markets of the future are only RB-401, a "Viper replacement" likely to emerge when the aero primarily intended as a powerengine manufacturers can satisfy plant for the next generation of the airframe manufacturers and business and executive aircraft, the airlines that they are cap. but which could also power the prevail not only through the discussing with the U.K. Gov-1980s, but into the 1990s and ernment the question of some even perhaps the next century. financial support for the The life of any modern aero. development of the RB-401.

But it is in the medium-range new generation of short-torange airliners



Production of Rolls-Royce Spey turbofan engines.

The precise nature of the some work on the power-plant, field, the battle is still power-plants for this new gen- and a "demonstrator" engine

the market could probably be ally a certain development for developments now envisaged of met adequately by "de-rated" the future, its position has been the A-300 Airbus, and especi-

competitive engine designs in the engine market in these any of the major categories in- classes alone is likely to amount volved—short. medium and long-range.

Rolls-Royce has been discussing the designs in the engine market in these amount to some 4,500-5,000 units, including and Rolls-Royce, together to some 4,500-5,000 units, including and together to some 4,500-5,000 units, including and together to some 4,500-5,000 units, including and together togethe per cent.) would cost about lbs thrust is now under way. £150m. scheduled for service in 1980.

In the meantime Rolls-Royce between the three giants—Rolls- eration of short to medium has run on the test-bed in the continues to push shead with Collaboration

a profit for the latter on its comprising

engines, because manufacturing likely that derivatives of it will risen sharply. only about £115m., and this has been achieved during a period

### Levy payments

price of each additional engine. produced. Further development Difficult times It has already received sub- of the Adour to higher powers is stantial levy payments, return- in progress, and market forerecoverable through a levy on engines.

In Europe, there has also dorne out of sales. The development of the The Dart engine, first development a favourable level of report said.

The engine is also con- a substantial rate. sidered suitable for the new M.D.

aero-engine development as made of this world market, but thrust engines, like the RB-211. doubt about future airline twin- sion. The RB211 is also in ment.

warious estimates have been versions of the existing big rendered less certain by this and, the sion. The RB211 is also in thrust engines, like the RB-211. doubt about future airline twin- sion. The RB211 is also in the ment. It has also become clear that of which a ound 1,500 are likely will be a demand for a new will be a demand for a new overall development cost of the Holland and the U.K. With its breed of engine, such as the JT-10D could run to as much as growing range of applications be substantial, there is no room aeroplane is likely to be either for more than two or three twin-engined or three-engined, competitive engine designs in the engine market in these

General Electric on the CF6 collaborative engine programme So far as the 42,000 lbs thrust engine for the European Angloversion of the RB-211 is con- German-Italian Tornado multi-cerned, the Dash 22, Rolls-Royce role combat aircraft. This is making payments to the engine is being developed and Government, which amounts to manufactured by a consortium Rolls -Royce, early investment in develop- Motoren-und-Turbinen. Union ment of that engine. The Gov- and Fiat, called Turbo-Union. ernment will receive £50m. of and it is estimated that eventuprofit payments for the first 555 ally upwards of 2,000 engines RB-211s. This compares with a will be required, including loss of up to £45m, which was spares, for the 809 Tornado airforecast in 1971, when the old craft that will be built over
Rolls-Royce collapsed and the the next ten years, including DESPITE the many unfavour for General Aviation in South be given to the business sector Germany and 100 for Italy.

than originally forecast. Instead in the future, are the military private flying licence is con-rate than was experienced in the costing the Government Adour programme, and the civil sidered average.

1973 and 1974 Spey and Dart. The Adour As one club points out, this the RB-211 after the 555th have been placed for more than omic conditions, engine has been sold, through a 700 Adour-powered aircraft. levy of 7 per cent. of the selling of which over 300 have been

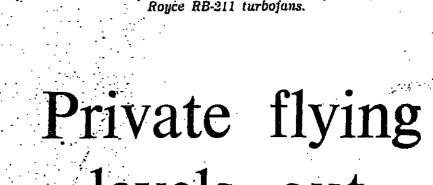
Rolls-Royce has also engines.

years, with a notable increase achieved was not in general developed a 50,000 lb. thrust The Spey turbo-fan has now in the north of the country, critical to any proposed soluversion of the RB-211, the Dash been in service for over 12 This year the favourable fly-tions to problems.

524, which will enter service years, and has accumulated ing conditions have also contributed.

A number of factors besides next year powering the long- over 13 m. running hours with buted to the overall position. The increased 1 ice of fuel by increased business traffic and range Boeing 747 Jumbo jets the eight types of civil and But times have been difficult were responsible for the fall should be transferred to West range Boeing 747 Jumbo jets the eight types of civil and But times have been dimentally in the rate of growth of general should be transferred to West ordered by British Airways and military aircraft it powers, for smaller and less financially in the rate of growth of general Malling. Similarly, private figures ordered by Saudi More than 4,300 civil and healthy clubs, and a number of aviation activity. These in ing at a number of more central these have closed, with the cluded the imposition of

Douglas engines continue to be built at



View from the window of a Lockheed TriStar showing one of the three Rolls-

new Rolls-Royce (1971) was 385 for the RAF. 324 for West able factors over the past few East England, which was the years which should have been second report of the Standing demand for business flying a Over 540 RB-211s have so far Thus, the RB-199 will involve detrimental to private flying Conference on London and likely to grow faster than any been produced, and this engine a production commitment that in Britain, most clubs continue South East Regional Planning other form of general aviation has become the biggest export matches American orders in to attract new business and and the Civil Aviation and is commercially most in programme of the U.K. aero- size, and which will be the some have had to refuse new Authority. space industry, with engines and largest of its kind ever under members. But the number of In the first document a num- "The few airfields most approspers worth more than £420m, taken in Europe. Since manulight aircraft being sold to indiber of projections on traffic priate for business activity already manufactured, mainly facturers, "learning curves" viduals and clubs has suffered volumes were made. Aircraft should concentrate upon the for export Last year, the engine favour the larger production considerably from high costs, movements in the flying club accommodation

from or so, so that it will become of gaining a licence has, in fuel prices would stabilise but business activity is limited by customers. However, this loss one of the world's great relation to other leisure activithat recreational flying would its extensive use has turned into the £50m. profit military engines.

the process of the world's great relation to other leisure activities that recreational flying would its extensive use has turned into the £50m. profit military engines. Among its other major Charges now range between £15 increase in fuel prices than efficiency by Rolls-Royce, and engine programmes, that are and £20 an hou and expendibusiness flying. In the event, more advantageous conditions likely to sustain the company ture of about £600 to obtain a fuel costs had risen at a lower than originally forecast. Instead in the future, are the military private flying licence is contact than was experienced in

engine powers both the Jaguar is not excessive when compared was too early to give an will in general be adequate to strike/trainer and also the with the average holiday abroad, estimate of the extent to which meet predicted levels of demands. Hawker Siddeley Hawk which is It is felt that the element of the patterns of demand were for recreational flying. It adds on order for the RAF, and the escapism involved in learning following the trend projected, however, that there is likely to Japanese T-2 strike/trainer to fly is one of the major but recent statistics suggested a The Government will connow been delivered for these fall in the level of disposable since the preparation of the for the foreseeable future such tinue to receive a return from three types of aircraft. Orders income brought about by econ. forecasts.

earlier Dart and Spey engines. production will exceed 6,000 mained stable in the past two in which the forecasts were in recreational flying at Biggin years, with a notable increase achieved was not in general

Arabian Airlines. Launch costs military Speys have now been these have closed, with the cluded the importion of of the Dash 524 are expected built or are on order, while in larger operators apparently higher rate of VAT on general of the Dash 524 are expected outil or are on order, while in larger of the Dash 524 are expected outil or are on order, while in larger of the Dash 524 are expected outil or are on order, while in larger to be about £80m. These are addition Rolls-Royce has an gaining the displaced member aviation aircraft and the unif the policy outlined is put into effect.

Similarly, there are usually wet winter of 1974-75. U.K. Government, with the com- licensed manufacture of the reports that the number of However, suggestions that tax effect. pany paying £45m. and the military Spey in China, and for individuals maintaining their incentives may encourage the Government contributions again an initial supply of those licences has dropped purchase of aircraft were not recoverable through a levy on engines.

In Europe, there has also borne out by any evidence, the

ity document entitled Airfields should in most circumstances Lorne Barling

earned £96m. In foreign cur- runs, it is expected that the which have been urther esca- sector were expected to rise growth in business aviation rency, mainly dollars, for costs of the RB-199 will be lated by the devaluation of from 935,000 in 1973 to 1.7m. although not necessarily to the

would average at the historical and Southampton. It is pointed engines, because manufacturing likely that derivatives of it will risen sparply.

long-term growth rate. It was out, for example, that Biggit costs were expected to exceed emerge over the next 20 years. On the other hand, the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost assumed that in the long run Hill's potential for handling the cost as the

> 1973 and 1974 recession made it unlikely that accepted. the 1985 forecast levels should

where situations of conflict per cent. of airports do not
British policy for the South- arise in the accommodation of charge the user, U.K. policy
East was outlined earlier this growth in both business and would appear to be lagging
year in a Civil Aviation Author- recreational flying, priority behind.
ity document entitled Airfields should in most circumstance.

rency, mainly dollars, for costs of the RB-199 will be engines delivered to Lockheed lower than they might other for use in the TriStar tri-jet.

After Rolls-Royce (1971) was formed five years ago, it was predicted that the RB-211 prometed the Court of gramme could cost the Government up to £195m., including uses in other military aircraft mentioned, on the first 555 experience it seems more than engines, because manufacturing likely that derivatives of it will

### Congestion

The report concluded that it clusion that existing facilities The depth of the congestion would have to be

1985 forecast levels should Nevertheless, there were cereached before the late tain airfields where congestion It was emphasised that in levels unless action is taken. It has already received sub- of the Adout to inglier powers is stantial levy payments, return in progress, and market fore. The level of private flying view of the long-term nature of most notably at Biggin Hill. For ing all its investments, in the casts indicate that total Adour activity is estimated to have re- the exercise, the precise year that reason, no further growth

Hill was desirable. It is suggested that a substan tial proportion of growth in club activity there might be displaced lised airfields is likely to be

The effect of such a policy on private flying, if pursued on a country-wide basis, would certainly not be of benefit to the Dash 524 has widened the laped 30 years ago, is still one market for the RB-211, since in of Rolls-Royce's major money addition to the 747 and TriStar spinners, in the Hawker it is being specified for two aircraft—the long-range new aircraft—the long-range L-500 variant of the TriStar and the McDonnell Douglas specifies continue to be been built, and new length of the McDonnell Douglas specifies continue to be been a rayourable level of report said.

In some respects the recommendations made in the report may be discouraging private flying has been an important flying interests. For example, coally developed and where 95 the suggested that a diffields cally developed and where 95 the suggested that a conflict per cent. of airports do not charge the user, U.K. policy

Royce with its RB-211. Pratt and Whitney with its JT-9D and with the airlines them collaboration between these competing with Pratt and In the military field, the General Electric with its CF6 selves have made it clear four companies has yet to be Whitney on the JT9D and other major international whether they want a twin settled. In the big medium-range mar- engined or three-engined air- Whereas originally, the JT series. ket that is likely to open up in craft. If they opt for a twin, 10D had been considered virtuengine breakdowns wreck your operating

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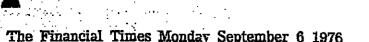
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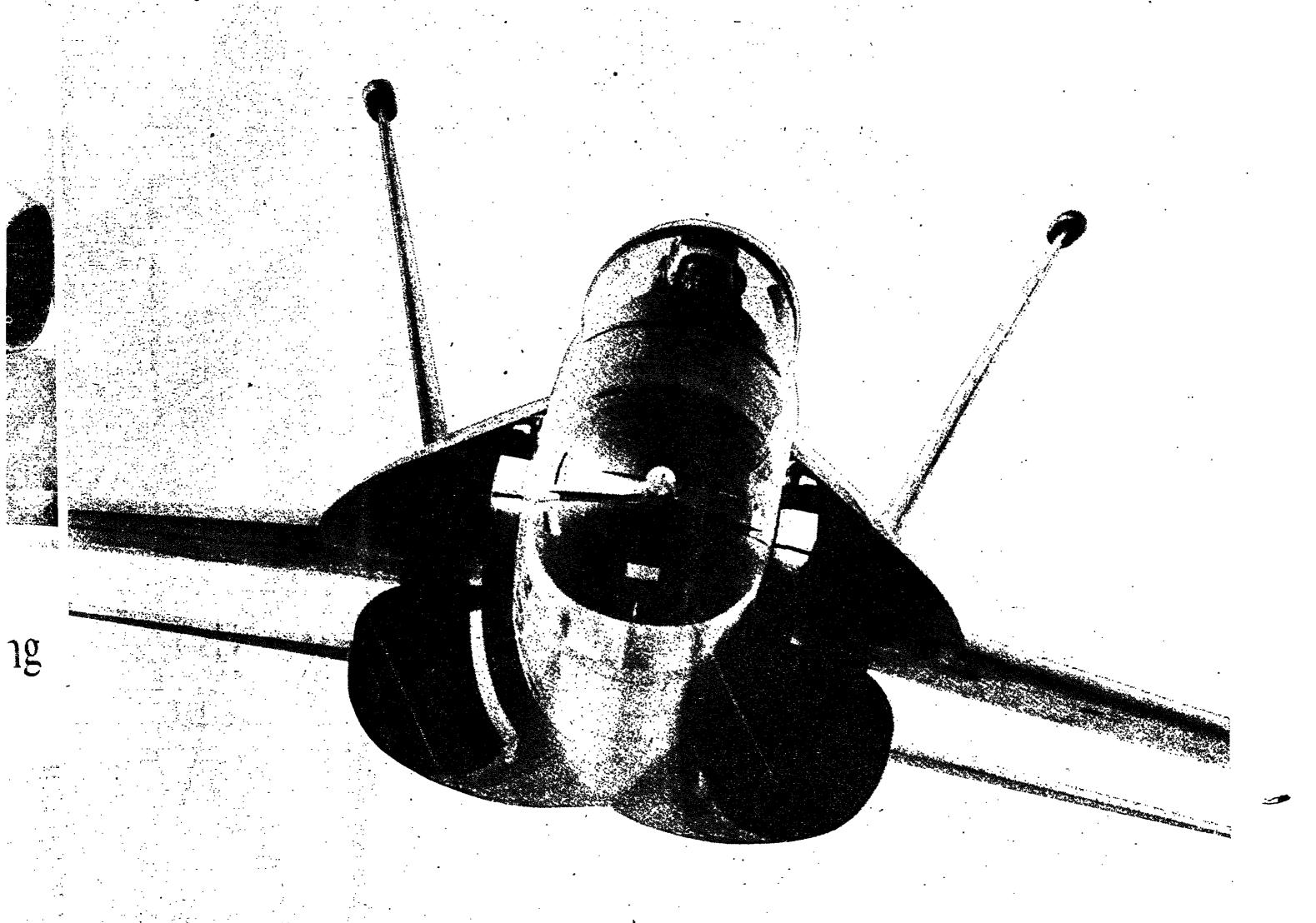
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# YF-17 MAKES INTERNATIONAL DEBUT

The YF-17 flying at the Farnborough Air Show is the technology demonstration prototype that led to both the F-18 Naval Strike Fighter being developed for the U.S. Navy and Marine Corps by McDonnell Douglas together with Northrop and the Northrop land-based version of the same airplane.

Northrop Corporation, 1800 Century Park East, Los Angeles, California 90067, U.S.A.

NORTHROP

# The scope for business aircraft

ALTHOUGH business flying gives a more optimistic view, worth more than £200m. and An annual growth rate of 2.5 continues to be a growth sector suggesting that expenditure on nearly 1,500 helicopters worth per cent. in general aviation of world aviation, Britain and general aviation aircraft in £164m. Europe continue to lag well be Common Market countries over A market for 190 aircraft of up to 1986, which would lead to hind the U.S. in their use and the next 10 years is likely to be heavier than 5.7 tonnes is fore increasing use of instrument application of these aircraft, worth £1bn, at end-1975 values, seen, worth £139m., with buy-flight rules and a greater But if the level of business fly- They predict that growth will ing expanding by 38 per cent burden on the EEC air traffic ing in the U.K. has yet to re- resume next year and that in the period 1981-86 over the control system. cover from the effects of the in- £393m, will be spent up to 1980 preceding five years. Britain As a result, business aircraft creases in fuel and overall and, given greater economic and West Germany are and air taxi services are operating costs over the past activity, £613m. between 1981 expected to share equally 73 expected to carry at least VHF, three years, it is in general and 1986, an increase of 56 per per cent. of the 10-year market VOR, NDB and SSR transponder better than expected in view of cent.

There is a likeli-

aircraft in West Germany have expected to be in business fly- cent. been encouraging, although ing, which will benefit from manufacturers continue to be of increased business activity and the opinion that the structure the flexibility not offered by and density of surface trans- commercial flight. Helicopters

Britain is also seen as the

ried out by Frost and Sullivan 14,000 single-engined aircraft twin-engined aircraft.

AIR-TO-AIR REFUELLING

AIRCRAFT FUEL SYSTEMS ACCESSORIES

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conomic conditions. The study finds that most of France's share reaching only 13 hood that a form of height In Europe, sales of business the growth in EEC countries is per cent. and Italy's 4.6 per reporting will be mandatory in

the EEC by the end of 1978.

However, this long-term projection must be seen in the context of world trends, well illustrated by the fact that port facilities already available are expected to expand their major market for aircraft over Brazil alone will buy about three-quarters as many general in EEC countries means that market share significantly. 5.7 tonnes and for helicopters, three-quarters as many general this market will always be Sales of more than 2.400 twin- and will be the second largest aviation aircraft as the whole the U.S.

However, a recent study car
himited when compared with engined aircraft, worth £420m, buyer of twin-engined aircraft, of Europe. In the U.S., because engined aircraft, arc expected to dominate the West Germany will be the impetus given to business of t policy on airports, and for geographical reasons, the booming market can be expected to continue.

The Piper Aircraft Corporation, which produces more twin-engined aircraft than any year, with increased sales, and scheduled airlines. tion, particularly with its

pointed out recently that the nearly 30 per cent. of all business category.

aircraft with longer range and foremost factor in the general business flights to airline air. The European light aircraft greater payload. aviation market place was the ports were made for the purpose industry manufactures about Despite the depressed state growing recognition that it was of connecting with scheduled 1,000 units a year compared to of U.K. demand, there has been

The Cessna pressurised 421 Golden Eagle.

sity than a luxury.

transport tool. In the U.S. airlines. This trend is clearly the 14,000 a year built by give any great cause other manufacturer in the it served all 13,100 airports, developing in Europe and the major U.S. manufacturers, confidence, world, is enjoying an excellent including 425 covered by U.K., underlining the need for American prices are also far continuing general aviation better related to the resources in the balance, with indication Recent cutbacks in airline facilities at major airports. of the small businessman.

Piper show that there were as the recently discovered fuel business aircraft and a recent field comes at the other end of Gatwick will offer some go 4,845 general aviation aircraft efficiencies in aircraft, were study has shown that 64 per the range, namely in the solution, but major development in the U.K., of which about important factors. It was cent of business aircraft are Hawker Siddeley HS-125, of is expected to take place; 1,000 were Piper manufactured, increasingly regarded by single-engined. The U.S. has which around 600 have been other airfields. A question 1,000 were Piper manufactured, increasingly regarded by single-engined. The U.S. has which around 600 have been other airfields. A question with Cessoa in second place with businesses as more of a neces- about 150,000 single-engined sold since it was launched in mark continues to hang on piston aircraft, of which 29,000 1972. Now great hopes are Northolt, The U.S. General Aviation According to a recently are placed by the Federal Avia- being pinned on the HS-125 Blackbushe, Association conducted survey in the U.S., tion Administration in the Series 700, a fan-jet powered Shoreham and Southarane

already sold and with good pro pects for the sale of anoth-10. The future of this aircin in major markels such as g U.S., Europe and Australia ar the Far East, is extremely promising. In the U.K., the fall in all ling has increased the contr

a surprisingly strong respon

to the new model, launched

the early summer, with n

huying a foreign aircraft, while giving Hawker-Side some advantage in its man ness flying in general, with high proportion of aircrabeing imported, is detriment

### Interlining

There is also continuing of cern in Britain over the ava ability of suitable airports for business aviation, particular in relation to the need interlining. Recent consultate documents from the Govern ment on both regional at national airport policy have h

lavajo range.

Services and the continuing 55 There has also been a trend The U.K.'s major contribu- be eased out as the volume of Recent figures collated by mph road speed limit, as well in the U.S. towards smaller tion in the business aircraft scheduled traffic builds my aircraft with longer range and have been suggested &

Lorne Barlin

# Cargo traffic on the upswing

traffic has escaped the buffeting whole concept of air distributo which passenger traffic has tion and which, if history after the turn of the decade has as happened in the mid-1960s, been causing a good deal of Then, handling facilities and anxiety both to the airlines carrying capacity proved inthemselves and to the air adequate to cater for the sudden

But if the monthly tonnages traffic. It arrived before carried by most of the interna-schedule, and in so doing pipped tional airlines since the earlier at the post plans that were being part of this year are measured implemented for the installation against comparable months of of automated handling equiplast year, the indications are ment, the construction view of most airline cargo chiefs aircraft for their operation. and executives of the major forwarders who prefer to back Aware their own judgment rather than

whether there is ever likely to beginning to of around 7 per cent. is all that scheduled services.

for attainment by 1980 is 10.5 much in terms of equipment good deal of concern to the per cent, and a maximum of and facilities but in improving scheduled airlines, there has as

dustry's recovery,

ALTHOUGH WORLD air cargo reaching implications upon the been subjected, its rate of repeats itself, could catch the decline which set in shortly industry on the wrong foot just

and unexpected upsurge in

that air cargo traffic has separate cargo terminal buildemerged from its recession and ings and for the increase in the is once again on the upward frequency of all-cargo services trend. That, at any rate, is the as well as the conversion of

that of the professional fore. By the same token the air casters.

By the same token the air forwarders had become aware of At the same time, there is the role they would have to play considerable doubt as to in future development and were be a return to the heady levels modernise their facilities and of growth—ranging between 17 to develop consolidation serand 21 per cent. a year — to vices which until that time had of them now automatically ship which cargo traffic soared been regarded with a certain consignments upping the scales during the latter half of the amount of reserve but which 1960s and the early 1970s. Since now account for about 70 per then an average rate of growth cent. of all traffic moving on

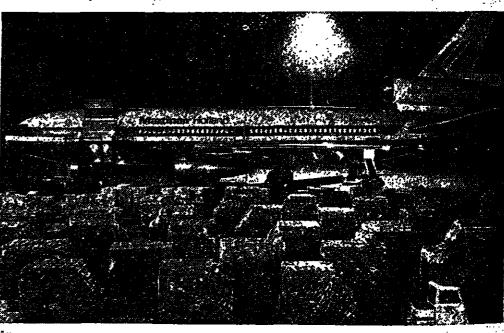
per cent, and a maximum of and lacendes out in improving scheduled airlines, there has as 11.4 per cent, by 1985. what is referred to as the "cargo yet been little visible sign on There are, however, many product," the main ingredients the part of the latter of factors that could distort these of which are speed, service, attempts to counter the competiforecasts—and not necessarily reliability and a rate to match, tion from the former. to the detriment of the in- The airlines believe that once Already they have found the formula developments, are under way to produce the right mix of Obvious which are likely to have far these four essentials they will If and when the scheduled have in their hands an incentive carriers do decide they must

> the ideal cargo product is the International they are attracting increasing year volumes of traffic away from the In the meantime, British Airscheduled operators.

enables them to change direc-narrowing the concentrate their services on flights on all routes. any country where there may The airline has produced

the past year with Nigeria. The frequency of the services a given tonnage over a period they are able to mount—com. of a year. The rates set by parable on some routes to those British Airways are for 1.500, operated by the scheduled 1,000 and 500 tonnes, and there carriers-and the low rates they is no restriction on the weights are able to offer-often 50 per of the individual consignments cent, below the lowest obtain, that may be shipped during the able on a scheduled flight — year to make up the contractual bave captured the imagination tonnage. Nor does the plan of shippers and forwarding place any restriction on agents alike. So much so in nature of the contents.

CONTINUED ON NEXT PAGE



Palletised cargo awaiting loading on a DC-10 of Martinair, one of the independent charter operators.

the case of the latter that many charter rather than scheduled

Although the increasing actiof around 7 per cent, is all that scheduled services.

the industry has been able to To-day, the industry — and operators and the increasing manage, and the most optimis more particularly the scheduled share of traffic they are attractic prediction so far recorded carriers—is thinking not so ing to themselves are causing a

which will be difficult to resist act, the most obvious step open by shippers who use air freight- to them would be to start ing only occasionally when the operating split charter flights at benefits of regular use are comparable rates and on the pelled out to them.

One of the most formidable dominated by the independent problems the scheduled carriers carriers. Under existing regulahave to face in their search for tions, airline members of the challenge of the charter services Association (IATA) are preprovided by the independent cluded from doing so, but these operators. These are now so could well be changed at the highly organised and, in most Association's bi-annual cargo cases, so efficiently operated that conference to be held early next

ways (BA) has made a move Currently, their services pro- which, if put into operation, iferate on routes to countries could go a long way towards in Africa and the Middle East altering the whole rating and to Hong Kong. But the structure of the scheduled airflexibility of their operations lines and ultimately towards tion almost overnight and between scheduled and charter

he a shortage of capacity on scheme under which shippers scheduled services—as has been and air forwarders are offered the case, for example, during special low rates in return for entering into a contract to ship

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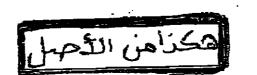
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capacity of their own, so that by far the greatest volume of

future launches in the Western

world will have to depend upon

U.S. National Aeronauties and

Space Administration. These

are already becoming crowded

and the situation could become

worse in the 1980s as world

needs coincide with the increas-

ing requirements of the U.S.

It is to meet this situation

This is the most revolutionary

concept of space application yet

devised, and while it owes

considerable debt to the vast

amount of knowledge acquired

during the Apollo manned lunar landing programme, it carries

the concept of men living and

working in space much further

The basic aim of the system is

to provide a means of deploying

satellites in orbit, which could

perhaps eventually make exist

ing rocket launcher facilities

obsolete, while also extending

the ability of mankind to under

take other tasks in near-earth

The Shuttle will comprise

two main elements, a Booster

and an Orbiter. The Booster

orbit, and will then fall into the

sea for recovery and refurbish-

ing for further use. The Orbiter

The Orbiter will be capable

The whole concept of the

it is likely initially to be expensive, since the U.S. can be ex-

pected to want to recoup from such rentals a good deal of its original outlays on the overall

inject the Orbiter into

orbit.

will

that the U.S. has already begun

the development of a new system of satellite deployment —the "Space Shuttle" plan for a manned, reusable "space transport system."

itself for launch capacity.

Deploying

# AEROSPACE VII

# Glamour fades from space research

MUCH of the glamour that accompanied the early years of space exploration in the late 1950s and 1960s has now evaporated, and space attracts far-less public interest and excitement than it did.

Made

There are several reasons for this. One was the growing awareness on the part of the governments and taxpayers who put up the money for spaceventures that these were threatening to become a bottomless pit unless more rigid control over spending was introduced.
Another was that despite the undoubted technical success of the manned Apollo lunar landing programme, there was some disappointment on the part of the public that there were not greater direct and tangible benefits stemming from it.

Coupled with increasing pressures on available monetary and manpower resources from other directions, these factors have led to a progressive shift in emphasis in Space activities in recent years, away from many of the grander aspirations of the scientists towards the more immediately rewarding aspects of space research, such as the greater use of the unmanned near-earth orbiting satellite, for both scientific research and direct technology applications.

The total number of unwife h manued spacecraft put into near-earth orbit from October 4, 1957 (when the first Soviet Sputnik was launched) until end-1975 was 1,140, of which 739 were still in orbit at the latter date (the others having been destroyed on re-entering the geostationary satellites (the liferating. Satellites are already however, after completing its the atmosphere). Many of these name given to satellites whose being extensively employed for mission, will return to earth and satellites have been military orbital speed is so geared to the such things as weather fore land like an aeroplane on a space craft for a wide variety earth's own rotational speed casting, and the monitoring of runway specially built at Cape of missions, but increasingly in that they remain virtually in Earth's resources - minerals Kennedy in Florida. recent years the balance has one spot over the earth's sur-hunting, detecting fish-shoals,

the development of unmarined of the circuits and two TV chan the essential signal reception. The first Space Shuttle launch is satellities over the past ten in nels of Intelsat IV, while the and transmission equipment and planned for 1980.

An integral part of the minimarined satellite is alrestly to more than 118 earth stations be added specific items of equipment will be the Spacelab, a schieving, some substantial in 78 countries providing roundment for almost any kind of small manned "Space laborative the clock service with near 100 task."

The first Space Shuttle launch is planned for 1980.

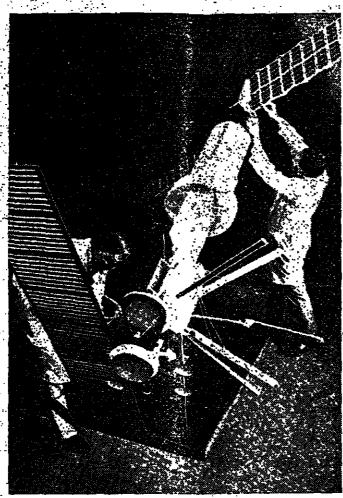
An integral part of the check service with near 100 task.

The first Space Shuttle launch is planned for 1980.

An integral part of the ship of the check service with near 100 task. ment of man's knowledge about per cent reliability. ment of man's knowledge about per cent remaining.

his near earth space environ. Continuing this line of Segment and enable small teams of scientists almost daily de development, Intelsat is already monstrating its capacity to ex-working on the Series V. An example of this "bus" in shirt-sleeve comfort, and for tend those benefits further in Comsats," which will come type of satellite is the Orbital periods of up to 30 days at a the decade ahead. Into service around 1979-80, Test Satellite (OTS) now under time, Current NASA planning

this field have been in the use munications satellite has been tions satellite programme, for of near-earth satellites for com- largely for telephone, telex, launch towards the end of 1977, Space Shuttle is so vast that the munications purposes. It is now telegraphy and TV purposes, and for the Aerosat aeronauti- best idea of its scale can be little more than 11 years since the further advances now cal satellite for launch before gained from the fact that the the first commercial geo envisaged in "Comsats" include the end of 1979. stationary communications sat their use for wide-band data. It is becoming clear that this vehicle will as large as the stationary communications safe their use and wide-ballo data. It is becoming clear that this vehicle will as large as the ellite, Early Bird, was launched exchanges, especially between trend towards finding new applipresent-day. European A-300 from Cape Canaveral (as it was computers and data-banks, with cations for satellites will condition. Airbus, then known) on April 6, 1965, the distribution of this and tinue, resulting in increasing. The U.S. aim with the Space It followed a series of experi-other types of information to a pressures on available launch. Shuttle is to make it available mental spacecraft, such as Score growing number of users, ing capacity through the 1980s. to all free-world users who can (the first communications satel especially in banking, commerce At present, only a few countries afford to pay the costs of an lite), Echo I and II, Courier, and industry. Telstar and Syncom, the first of But other uses are also pro- Union have satellite launching has been put on this as yet, but



Model of the Seasat orbital satellite—built for NASA by Lockheed Missiles and Space Company-which will monitor the world's oceans.

recent years the balance has one spot over the earth's sursuing towards civil satellites of various kinds for scientific research or technological applifications.

Since Early Bird, with its 66 specific new satellites now under development envisage big sion has been steady, though the supervenents in both maritime and seronautical telecommunications. Telecommunications and seronautical telecommunications and seronautical telecommunications and seronautical telecommunications. Telecommunications and seronautical telecommunications and seronautical telecommunications and seronautical telecommunications and seronautical telecommunications of satellites in orbit, the servicing of satellites in orbit, the servicing of satellites, the operations are beginning to emerge the L500 circuits on Intelsat basic "bustype" satellite processing and manufacturing, and most recently to the chassis can be built containing manent manned space station. The first Space Shuttle launch is planned for 1980.

continue to devote substantial two-way voice circuits. In the space segment of the projected using Spacelab. funds to unmanned interplan- meantime, so as to preclude European Regional Communica- The crews of the Orbiter etary probes, such as the recent system saturation before that tions Satellite System for the could consist of up to sever successful U.S. Viking space date, it is planned to place in 1980s, the OTS is in fact also people—the commander, pilot creating son Mars, an in-orbit from later this year a virtually a "modular" type and mission specialist, and up to creasing share of future space number of Intelsat IVA satel-spacecraft which can serve as a four payload specialists, who spending is likely to be conlites of an improved design and basis for a wide range of "apcentrated upon the more imeach with capacity of over 6,000 plications technology satellites." mediately rewarding develop two-way voice channels and two The basic OTS design is already ment of near-earth space.

The most rapid advances in the development of the com-Marots maritime communication. The most rapid advances in the development of the com- Marots maritime communica- equipment involved.

the decade ahead.

It seems likely, therefore, providing users with another development by the European envisages that about 40 per cent. That while countries such as the considerable increase in Space Agency, for launch in of all Space Shuttle flights from U.S. and the Soviet Union will capacity, each having 12,000 1977. While intended to test the 1980 to 1991 will be missions

outside the U.S. and the Soviet individual mission. No figure

venture. Since any mission could run up to 30 days, the cost per mission could amount to millions of dollars. For this It is this, perhaps more than two reasons—first, because more to issue a directive to BA to reason, it seems likely that the any other feature, that makes cargo iraffic moves on the apply the rates, or bow to the conventional rocket launching the BA scheme of such consequence for, by applying the time an "open rate" situation criticism from the British until the Space Shuttle is able same rate to all types of comiss in existence on the route and Shippers' Council and other to demonstrate that it really modities shipped under con- this effectively enables airlines trade organisations as well as can reduce the cost per pound tract, the atrine is virtually operating on it to set their own from the majority of the U.K.'s of payload deposited in Space. introducing what is known in rates, subject only to the ap-air forwarders, most of whom But there is the possibility industry jargon as a freight proval of their own govern have already signed letters of that the U.S., under pressure of zill-kinds" (F:A:K) rate and ments. In the case of the North intent agreeing to enter into demand from its own users, and thereby abolishing at a stroke Atlantic route, however, the contracts with the airline as perhaps also for political

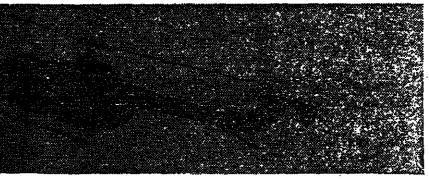
in Guyana, owned by France argo rates conferences.

Carriers operating on the route, the concept, and contract rates Ariane, and it is expected that

The schemes will operate only Seaboard. Pan Am. TWA and will become the order of the the first test launch of this on services from the U.K. to National—then a delicate situa- day on all the air routes of the vehicle will take place around



BO105 You can buy a faster helicopter. Bigger, more powerful helicopiers are available. But in the 2.3 ton class, only the lightweight BO 105 gives its pilot full twin-engined performance-performance already proven in five years of world-wide service, day and night, under all weather and climatic conditions.



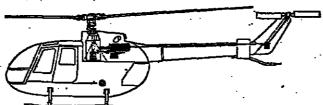
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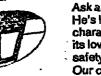


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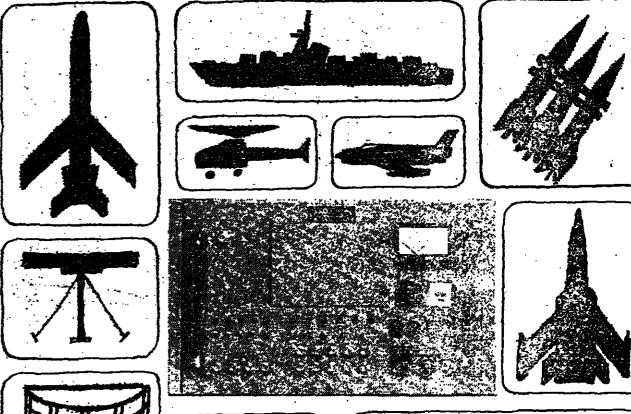
Our chief pilot also raves about the BO 105's Rexibility in the tight loops and rolls he performs-yet further proof of the BO 105's manoeuvrability in extreme flying positions. There's only one BO 105. Made in Germany.



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Harry Miller

CONTINUED FROM PREVIOUS PAGE

modity rates which form the (CAB) insists on being con effect. backbone of the IATA rate suited when rate changes are. But whatever the outcome on available to others as it now structure and are the bane of proposed, regardless of whether the North Atlantic, now that suggests it intends to do.

cargo rates conferences. points in the U.S. The airline tion could arise. has selected the North Atlantic In the face of a CAB rejection route as the testing ground for the CAA would have to decide

forwarders and shippers alike, or not an open rate prevails. British Airways has shown its For these reasons, the EuroFor years forwarders and The U.K. Civil Aviation hand it seems clear that the airpean Space Agency on this side
shippers have been pleading Authority (CAA) has already line will seek to introduce conof the Atlantic is developing its with the IATA carriers to sub- given its approval for British tract rates on other routes. One own conventional rocket stitute commodity rates with a Airways to go shead and put of the first might be to Hong launcher system for putting unstitute commodity rates with a Airways to go aheas and put of the first might be to hong manned satellites and other FA.K rate, and although some its contract rates into effect. Kong which, being a cabotage manned satellites and other of the bigger airlines have been which it planned to do on route is free from all governing favour of it, attempts to September 1. If the U.S. Civil ment controls when it comes to the Equatorial launching base the agreement on the issue agreements are propagatives. Board rejects the rates. reach agreement on the issue Aeronautics Board rejects the rates. have always been rejected when rates—and considerable pres. Once that happens it will be which is a member of the ESA the unanimous decision has sure was being exerted upon it only a matter of time before The Guyana site is now being been sought at successive IATA to do so by the four American other airlines fall into line with extensively refurbished for the

the thousands of special com- U.S. Civil Aeronautics Board soon as its rates come into reasons, will not be able to make the Shuttle as freely

# Equipment suppliers kept busy

brought a decline in the for craft able to operate into fatigue testing rig whose comimpulses rather than a varying Laker and British Midland. tunes of many of the air trans- appropriately equipped airports plex computer control propositions as a result for several days at a stretch, it grammes were developed by The problem of complete clude new versions of the He of world recession, a number of is going to take a great deal of CAP in Britain, more advanced electrical isolation of the Up Display (HUD) equipments attention to environmental for landing in poor visibility.

Pressure on supporting indus
attention to environmental for landing in poor visibility.

Nevertheless, there is a great through still simple, landing areas such as the EEC.

Pressure on supporting indus
Apart from the mechanical through still simple, landing development teams have had to pulses at the receiving end.

Apart from the mechanical deck to controls and vice versa along "light pipes," bundles of continuous optical fibres, and turned back into electrical pulses at the receiving end.

Before leaving the topic of continuous optical fibres, and turned back into electrical pulses at the receiving end.

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and there will be growing pres- Constance Babington Smith of sure on the civil aviation buzz-bomb fame pointed out in authorities all over Europe for her biography of Amy Johnson: improvements in traffic control. ... the whole art of flying radar surveillance and so on, is to come down to land again. apart from the pressing need to And one might add: ". . . after provide an all-round improve- having got off safely." ment in the power and capabilities of the on-board equip- Testing

Pressure on supporting indus- craft and helicopters, the Philips get themselves involved in a tries is unlikely to diminish, organisation being one of the however, as their current promain contenders in this area, even disregarding the military perienced for small weather market—something like 18,000 radars with ranges of around markings will be added to the 200 nm portion of the processing of which the tender for the marking controls. Set themselves involved in a great deal of basic or near-basic controls. Contracts

Contracts

on the target—work on providing digital engine controls work on the heat-treatment and sintering of metals, vacuum processing of alloys and the flight control, system has been concorde 202 has been fitted investigation and application of developed is the Boeing converted to the developed in the marking control of the marking controls. machines will be added to the 200 nm, particularly now that aircraft population within the the use of digital computer Common Market countries alone techniques is providing a clearer one example. Indeed, a company U.S. Air Force on completion of Olympus engines.

. the whole art of flying

pean skies between now and aircraft tyres, wheels, and com- McDonnell - Douglas, 986. plete undercarriage and braking spatiale, Dassualt, de Havilland, the control surfaces and adjust- All the main components for During the same period, the Systems. Dunlop's Aviation Dornier, Fokker, Fiat, Kawasaki ment of engine thrust in line the GPDC go into a single LATR European airlines will add no Division is operating a unique and Saab, among others.

Dornier, Fokker, Fiat, Ka and Saab, among others. work being carried out, for in- rest to as much as 335 mph. complex while simplifying the stance. Category II/IIA Installed at Fort Dunlop, this actual control device layout and "blind" landing by British computerised unit can simulate making it less vulnerable to Algorithms in computerised unit can simulate making it less vulnerable to Gomputers.

Algorithms for the first ment experience to draw and operated from a single consequence from a single consequence from a single consequence forms for the first ment experience to draw and even when a project stance. But plessey is the U.K. representation wave Landing Systems, is being the routine jobs in flying to inspired systems work is the tive in the bid to build and assessed alongside other systems when a project in the proposition with a single consequence for the first ment experience to draw and even when a project in the proposition with a single consequence for the first ment experience to draw and even when a project in the proposition with a single consequence for the first ment experience to draw and even when a project in the proposition with a single consequence for the first ment experience to draw and even when a project in the proposition in the proposition with a single consequence for the first ment experience to draw and even when a project in the proposition in the proposition with a single consequence for the first ment as a single consequence for the first ment experience to draw and the proposition and the proposition in the proposition in the proposition of the first ment and the proposition in the proposition in the proposition of the proposition in Airways in conjunction with aircraft inertia and perform any damage or failures.

Concorde's carbon brake is just expected to be placed by the control unit) on one of its Common Market countries alone techniques is providing a clearer one example. Indeed, a company of countries alone techniques is providing a clearer one example. Indeed, a company of control over the next ten years. Exist-display of conditions ahead able to cope with such a diffi- its AMST advanced medium. This equipment will control cult material as beryllium and short take off and landing transful full flow and jet efflux nozzle facilities will clearly become But all the foregoing applies more overcrowded or inadequate to aircraft in flight and, as into reliable base applies that the foregoing applies particularly intractable metal machine is the YC-14 and by It can also handle variable for Trident and Concorde has way, it should have begun to noise abatement procedures.

already solved some of the most yield some information on the Important in the acronym called on to tackle.

ment of the light aircraft.

1 esting

1 of the latter, according to Frost and Sullivan, some 13,700 has taken a world lead in the new units will appear in European skies between now and objects to spend heavily on research and aircraft, sensing aircraft alter the control programme in development, but make an motions and pilot commands the system's electronic logic inspired choice of subjects for and handling the correspond. This contrasts with the exten major programmes. Dunlop's ing data streams through a sive physical changes that have international clients include trebled computer system to program. international clients include trebled computer system to pro- to be made to to-day's McDonnell - Douglas, Aero- vide automatic positioning of mechanical controllers.

computers.

Airways last year, particularly It is interesting to record between flight deck and control tions. The latter is a ground in November, when Tridents that, in this instance, as in the surfaces is in the form of a proximity warning device which

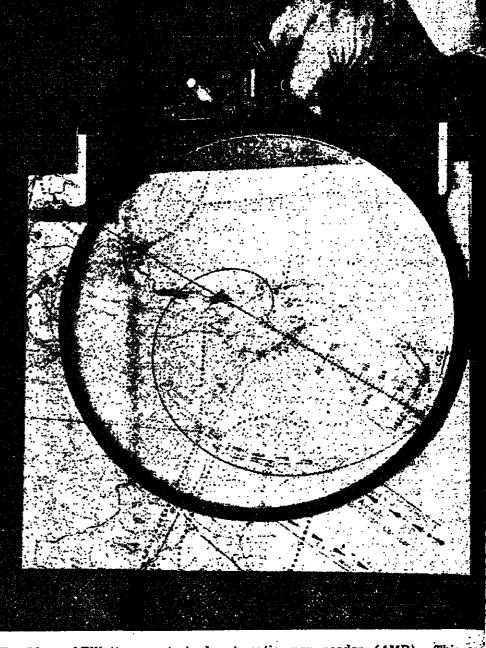
THOUGH the past year or so were practically the only air- case of the Concorde long-term stream of binary coded has already been ordered by

secondary though still import- time, sophisticated electronic use is being made of the power various components of the con- pioneered some ten years ago ant factors have kept most of engineering and endless inter- of electronic data processing to trol network has been given a by Elliott-Automation and now the supporting industries on national argument before the solve difficult industrial prob- particularly neat solution which developed into an ingredient of their toes. These factors derive smaller transports, let alone lems than anywhere else, consists in turning the electrical what is probably the most sophimainly from the constant search the light plane, are equipped of increased safety, closer with the necessary black boxes attention to environmental for landing in poor visibility.

Important in the acronym for difficult problems that the power lift concept it embodies these units are the letters GP: modern metallurgist could be to get it off the ground in general purpose. They imply that whatever changes are made To play an international role The Marconi equipment is ex- to the engine, or when the units in this particularly exacting pected to improve performance are applied to different engines. industry a company not only has and handling qualities of the all that has to be done is to

The military developments in-

into reliable brake components the time Farnborough is under intake geometry, reheat and



The Marconi-Elliott computerised automatic map reader (AMR). This con tinuously computes and displays the position of the aircraft, by dead reckoning using data inserted by the pilot.

During the same period, the systems.

During the systems in the the GPDC go into a single year.

With flight commands. It is long box and include a compact two new transceivers, one for to be integrated by Plessey into Harrier, Tornado, Concorder with flight commands. It is long box and include a compact two new transceivers, one for to be integrated by Plessey into Harrier, Tornado, Concorder with flight commands. It is long box and include a compact two new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for to be integrated by Plessey into the new transceivers, one for the other for the period two new transceivers, one for the other for the period two new transceivers, one for the other for the period two new t

tive in the bid to build and assessed alongside other syssemed, all is not lost. I supply a new landing guidance tems by the All Weather Opera-RAE and Smiths Industries, is cycle of tests with tyre It has fallen to another street is concerned, this is prospectively and interest are concerned. angles of steer, camber, or both. But this, like airborne collision The forces working on the tyre avoidance systems, is pioneer—in three planes are read off an aircraft by means of highly ing. Alongside it are six ening work and although blind immediately and displayed and automated equipment based on tirely new avionic systems.

ing work and although blind immediately and displayed and automated equipment based on tirely new avionic systems, five landing paid off handsomely for recorded through the attached a series of tiny computers. In for military work and one for the European Division of British computer.

Airways last year, particularly It is interesting to recorded through the attached a series of tiny computers. In for military work and one for cations equipment for the were studied before the U.K. have been engaged in such this, all the information flowing both civil and military operations are read on an aircraft by means of nighty ing. Alongside it are six entire ingular to the unique of the unique of the unique of the were studied before the U.K. have been engaged in such this, all the information flowing both civil and military operations are read on aircraft by means of nighty ing. Alongside it are six entire unique of the u

Ted Schoete

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# U.S. industry sees fortunes revive

AFTER two years during which most sections of the U.S. aerospace industry have been beset with fears of falling profits and failure, the past 12 months have seen a sudden revival in the industry's fortunes. Indeed. some of the best known companies in both the construction of aircraft and their operation have been among the best per-forming shares on the U.S. stock markets.

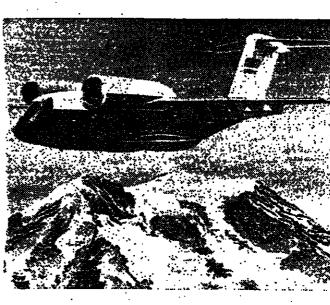
Even Lockheed, saddled with the burden of the TriStar, and for so long the industry's lamest duck, is now beginning to emerge from the grip of its bankers and to forecast a steady improvement in its underlying business. The latest decision by British Airways to buy more TriStars will be another factor supporting the company. As with Lockheed and other

airframe manufacturers, one of the principal factors which explain the improving outlook increasing profitability from military contracts.

Military spending accounts for around 80 per cent, of the

Just how firmly based this recovery in military outlays will Widespread prove cannot be confidently predicted and some projected

building the F-16, scheduled in other countries will be history. In 1975 the industry to share in the profitability of needed. McDonnell - Douglas lost over \$100m. as costs rose



The YC-14, the short takeoff and landing aircraft being developed by Boeing for the U.S. Air Force's advanced medium STOL transport programme. The aircraft made its maiden flight recently.

to be the most costly military increase rapidly enough to fill market the manufacturers are cloud the outlook for the a programme in history, has yet the gap. It is abundantly clear, aiming at.

It is abundantly clear, aiming at. to be finally approved.

There are indications that its and has been for some time. By the end of the decade lieve, however, that while they approval could hinge on the out that aircraft manufacturers demand for these types is are some major carriers while come of the November president of the next senere magnificant the next senere mag dential election. Certainly development of the next general meantime the private airlines tively unprofitable, the industrial development of the next general meantime the private airlines tively unprofitable, the industrial development presidential candidate tion of civil aircraft themselves, have somehow got to get their try's regulators will not in

Jimmy Carter has indicated that Costs are too high, and with operations on to a sound pose too strict a programme he will take a close look at the recent experience of demand enough tooting to be able to price restraint and the and for new aircraft falling far short finance the new equipment. Irrespective of the final decislon on the B-1, defence spending on acrospace is destined to and Boeing, for example, have (and jet fuel) prices, the years will companies like made it clear that international 1974-75 were two of the worst building the F-16, scheduled in other countries will be history. In 1975 the industry an open question. appears to be close to a co-opera- and passenger demand slumped.

U.S. aerospace industry's output while there are new pro- aerospace interests, among and it was the decline in this grammes around it is generally others, and Boeing with the spending which constributed so believed that there are not much to the industry's difficulties. With political concern enough of them to ensure that can be reached. Political factors for capital) to the industry's difficulties. With political concern enough of them to ensure that can be reached. Political factors for capital) to the industry's capacity is fully that the can be reached. Political factors for capital) to the capital that there are not form clear that final agreements can be reached. Political factors for capital) to the capital that there are not form clear that final agreements can be reached. Political factors for capital to the capital that there are not form clear that final agreements can be reached. Political factors for capital to the capital that there are not form clear that final agreements can be reached. Political factors for capital that there are not form clear that final agreements can be reached. Political factors for capital that there are not form clear that final agreements can be reached. Political factors for capital that there are not form clear that final agreements can be reached. Political factors for capital that there are not form clear that final agreements can be reached. Political factors for capital that there are not form clear that final agreements can be reached. culties. With political concern chough of fine to the capacity is fully tors are that much more in been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised. Thus there are fore fluential when international concern been indications that the Crapability growing and new utilised.

what sort of market there is for the industry should be de-res new aircraft and perhaps more lated, and if so whether the crucially how the airlines in would lead to such severe con private hands are to pay for petition that airlines would them. Most forecasts indicate driven out of business or, There is fairly widespread that the principal market is in ternatively, to politically # developments, notably the new agreement too that commercial short-to-medium range wide acceptable price increases. B-1 bomber which could prove aircraft construction will not bodied jets and this is the This uncertainty continues

a phenomenal recovery in t industry's profitability, and W Street analysts now see the l line profits overall this year

Vigorous cost-saving rammes, stabilisation of fi costs and higher fares ? among the factors which his contributed to the recovery. needs to be noted, however, the while the airlines as a gro are profitable there are so notable exceptions amo individual airlines. Thus wh Pan American and TWA ha both cut their losses sign cantly in the first half of t year, they are still both lost

### Argument

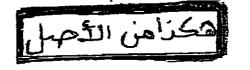
Increasingly the issue of far is seen in these circumstant as crucial to the industry's ( velopment. The argument ri that if the airlines are to g erate internally the cash to t One problem, however, is that tion agreement with French ance new capacity (and the P fits which will enable them tap investors for capital) the

duction, defence spending is increase in military spending. Beyond this, however, the forecast to increase and with the military side of the industry question remains as to just the profits of the manufac will have to contract.

What sort of market there is for the industry should be devel

try's more profitable con

Stewart Flexue



# Renewed growth for the airlines

OVER THE past few months, all frequencies; by new inter-airline is doubtful, for example, The first of these is almost cer-

expect an average annual Reluctance now and 1981 the industry can erowth rate of about 8 per cent. with Europe, and the North able difficulties in maintaining holders.

he sudden slackening of the factorily, and that their over- rising volume of traffic, it the new era that lies ahead, as the U.S., it has been tackled year or so while not only the though at many airports there and other resources, was bound growth rate in 173.74 as a receptorily situation is coming remains doubtful whether the many arrows to the manufacturers seek to satisfy may be adequate runnway capacity of the traffic. strowth rate in 1976 as a 1c capacity situation is coming remains doubtfut whether the ment of the economic recession, fully under control.

Overall result for 1976, when paid by governments to this the air transport industry can the airlines as to the long-term city (especially if the trend to that preparations should be combined with the excessive in Only when that combination it finally becomes available, will need for standardisation of expect the problem to recur in noise, fuel-efficiency and eco- wards the use of bigger wide made for it while the pressures for new aircraft to the of factors occurs will they be show any significant improve regulatory control. This would an even more determined now that the public at designs, but a string more passengers, is the way, and while it is to be aircraft to the fashion now that the public at the public at the ment.

variety of ways, such as of expansion, there are many lems that the renewed fares straight cancellations of flightmajor problems outstanding. It expansion of traffic will bring structed.

he indications have been agreements to curb the number whether the scheduled airlines fainly likely to be pressures for trengthening that the recession of seats on particular routes, are likely to gain much financial reductions in fares, either which began with the fuel crisis such as the North Atlantic, by benefit from this expansion, at directly or by the introduction in the winter of 1973 is now agreeing on "route swaps"; least for some time to come, of new types of excursion or

bears to be stronger on the again notably the North control long-hand routes, with some of Atlantic, an over-capacity situathe regional short to medium-tion has persisted, and even view recently published, flown before hand routes, such as in Western with the welcome return to a stressed that 1975 was another Just how t Europe, responding at a slower period of steady expansion it disappointing year for the world able to meet these pressures— rate. seems likely that many of the air transport industry, with the which are also certain to be This improvement, provided efforts to curb this problem will continuing, recession combin-compounded by the growth of is sustained (and so far there have to be sustained well into ing with severe cost inflation low-fare charter competition, for is no reason to believe that it the period immediately ahead to produce "a totally inade example on the North Atlantic will not be), is likely to be wel. Many airlines have still not quate" financial result. Revenues —remains to be seen. But what come to the airlines for a digested fully the substantial of the IATA members in 1975 also seems certain is that those variety of reasons, although it volume of additional seats that reached the record level of pressures will be supported by will also bring some major became available to them with \$30bn. (out of \$37bn. for all Governments who, for political broblems. In the first place, the the delivery of wide-body air the world's airlines), but total purposes, will be arguing for promisers, in the mat place, the craft such as TriStats, DC-10s, expenditures exceeded revenues cheaper mass transport at a be at a slower rate than that of Jumbo jets and A-300 Airbuses to produce an operating loss of time when their own regulators. be at a slower rate than that of Jumbo jets and A-out rationess.

1.3 per cent, or about \$400m. systems are making it increasionically experienced in the mid ceding, and even during, the period of recession. At the "This result is totally make money." Recent studies prepared by same time, many airlines are inadequate for future development in the International Air Transport association (IATA), covering its large orders placed in the era IATA, "but would have been of high traffic growth before the worse without the subsidies and recession began.

East (14.3 per cent a year). North America some consider and a fair return to share-Atlantic, both already mature production lines at economic,

wer, and that world-wide air and by grounding and some- and certainly not until they have other

As a result, there is still a scheduled international services

The steep rises in costs of past few years, stemming from sheets are improving satis- creased revenues earned on the and it is to be hoped that in some countries such to be a hiatus over the next

ransport is picking up again, times selling surplus aircraft. been able to get the rapid rise especially since the bulk of the so far, the improvement ap- Even so, on many routes, and in costs of all kinds under increased traffic will be coming from those sectors of the The IATA, in a financial re-population who have never

potent forces working against veniently swept out of sight Paying for this new genera-

But the expansion in the fuel-inefficient) airliners, in much before mid to late 1977 industry moves more confi-This lack of a satisfactory, period ahead will bring other favour of a new generation of at the earliest, although the dently into the period of retaxation concessions granted by uniform global system of gov. problems, many of which were much quieter aircraft that can present comparative trickle of newed growth, many cherished ernment regulation for air already evident when the reces serve right through into the airline orders is likely to be airport schemes which have The IATA Cost Committee transport is one of the most sion began but which were con- 1990s.

silhough the pace of economic marked reluctance on the part alone an additional 14 per cent profitable air transport network urgent need to deal with them another major headache for the sible to predict that the expansion, can be expansion, can be expected to vary widely. The big proceed to vary widely. The big proceed to vary widely. The big proceed to vary widely are gest rate of growth is expected to vary and the Middle process. The big process interest and other financial expansion in the air, with all that it is concerned, it seems clear that entails in new capital financing, in turn has been and is causing to provide funds to cover air transport regulation presented the world, and the middle process full taxation liabilities.

The process of economic marked reluctance on the part alone an additional 14 per cent profitable air transport network urgent need to deal with them another major headache for the development of a healthy, under the carpet when the carpet when the development of a healthy, under the carpet when the carpet when the development of a healthy, under the carpet when the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when the development of a healthy, under the carpet when another major headache for the development of the develop In virtually every country of disappeared. Among these are airlines. It has been estimated So far as the airport situation sion in the air, with all that it often sharply contrasting views, of quieter aircraft to meet the present that the traditional quate for the early 1970s, be calling for substantial injections on how their particular air increasingly stringent noise lenders, the major banks and come inadequate for the 1980s of cash. on how their particular air increasingly stringent noise leaders, the major transport systems should be regulations that governments insurance companies, are pre- and 1990s. In some countries, For what has been happening are being forced to implement pared to finance this scale of grandiose airport plans that over the past three years is that Atlantic, both already mature production lines at economic, The steep rises in costs of markets, expanding only at let alone profitable, rates. It all kinds, but especially labour, run.

Secondly, this expansion will sepansion will seem to considerable way to wards easing much of the overwards easing much of the overwards easing much of the industry for the really over, that their balance have been mitigated by the integral of the steep rises in costs of transport systems should be regulations that governments insurance companies, are profit from sheets are improving satis-creased revenues earned on the steep rises in costs of transport systems should be regulations that governments insurance companies, are profit from sheets are insurance companies, are profit from sheets are increases in costs of transport systems should be regulations that governments insurance companies, are profit for implement pared to finance this scale of grandiose airport plans that over the past three years is that over the past three

noisier (and, incidentally, also forecast is not likely to flow sion fades, and the air transport

CHAPPENDING PROPERTY OF THE PARTY OF THE PAR

Artist's impression of the newest member of the Lockheed TriStar family—the Dash 500—which has been

ordered by British Airways for introduction into service in 1979.

maintained until then.

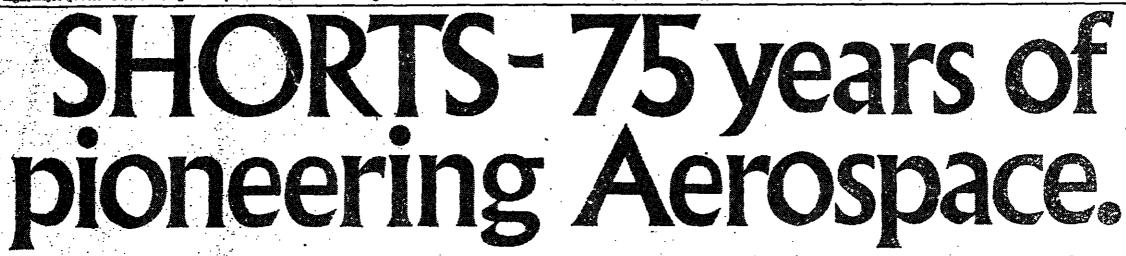
fleets in the earlier part of this purchasing of new equipment. It is against this background world airline industry much large can see that air transport lines satisfy their lenders that maintained), there will be a welcomed, in many parts of the decade.

For while the situation in air of financial uncertainty, how easier, but also go a long way itself is resurgent.

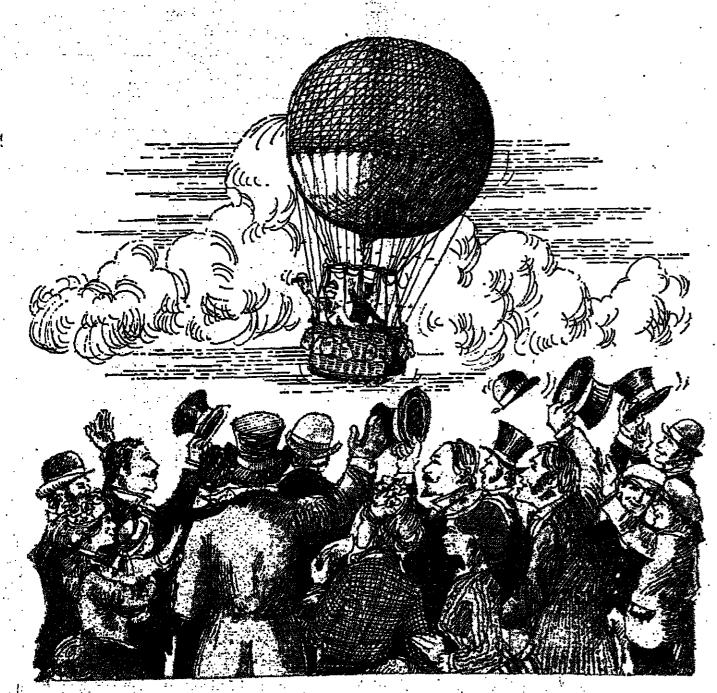
The airlines have tended to transport may be moving back ever, that the world's airlines towards achieving the lower In turn, this will bring in on a rising respective, capacity, resulting in congested the air transport system is ope with this over-capacity in into a more favourable period will have to face all of the prob- cost basis upon which a cheaper creased pressures on the airlines. For these reasons, the major passenger handling facilities on ready for it.

1 variety of ways, such as of expansion, there are many lems that the renewed fares structure can be con- to phase out the older and "re-equipment tide" often the ground. Thus, as the recesoften the ground. Thus, as the reces-

been gathering dust will have to be brought out again and



It was 1901 - Queen Victoria had died in January; Edward V11 opened his first parliament; the Boer War was in its second year; they were digging for gold in the Klondyke; the Trans-Siberlan Railway opened; and the Short brothers set up a workshop in Hove for the manufacture of aerial balloons and began making some history of their own:



Like winning the UK's first aircraft production contract — from the Wright brothers themselves:

Like building the first British aircraft to fly a circular mile,

And the first to take off from the deck of a ship underway,

And the first to carry a torpedo.

Like producing the world's first all-metal, stressed-skin aeroplane and setting a standard in aircraft design for years to come.

Like introducing a new conception of comfort to civil aviation with the big C-class flying

Like producing the RAF's first monoplane four-engined heavy bomber.

Like winning the UK's first post-war export contract for aircraft,

And developing the world's first fixed-wing VTOL aeroplane,

And the RAF's biggest freighter,

Beltast and London

And the world's largest light aircraft,

And the most widely used ship-to-air missile, And Britain's first shoulder-launched guided weapon,

And the first ever wide-bodied commuter airliner.

As well as becoming Europe's leading specialist in jet engine podding and establishing a tradition of international co-operation by the production of major components for great aircraft like the Boeing 747, the Lockheed TriStar and the Fokker F.28.

We have come a long, long way since 1901, but somehow it doesn't seem like 75 years!

# RAF in tight trim

THE PRIMARY concern of the will be completed during 1977. craft. It is of the greatest im- as to how the Air Staff's needs nificance in NATO, rivalling RAF to-day is to ensure that When this merger is completed, portance that we put a lot of can be met. As yet, AST 403 is that of the Tornado itself. despite the substantial cuts in the RAF command structure in effort into strengthening our little more than a concept—a Also looking ahead, the RAF despite the substantial cuts in the U.K. will have been reduced air defence."

Its budget stemming from the U.K. will have been reduced air defence."

Its of requirements as to flying is expected to get this year the public expenditure reviews of substantial savings in personnel tinues, however, on the equipposale acroplane.

Also looking ahead, the RAF list of requirements as to flying is expected to get this year the subsequent Government's eight Commands to two, with further cuts in spending conpublic expenditure reviews of substantial savings in personnel tinues, however, on the equipposale acroplane.

In the U.K. will have been reduced air defence."

Its of requirements as to flying is expected to get this year the substantial proposale acroplane.

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It is of requirements as to flying is expected to get this year the substantial proposale acroplane. tinue to provide a first-class the size of the RAF overall will gress is being made in develop- The discussions about AST jet trainer (which is also being fighting force capable of fulfill- have been reduced from a total ing new aircraft for the future. 403 are likely to continue for offered to overseas air forces fighting force capable of fulfill. Have been reduced from a total ing new aircraft for the ing all the commitments of 113,000 personnel at April 1. The production contracts for the imposed upon it by U.K. 1970, to around 87,000 at April Anglo-West German-Italian Tornado Multi-Role Combat Aircraft on this programme has already into and will replace the ageing

maritime force are related to Region of NATO. continuing commitments in the Mediterranan.

In addition to these changes, Damage further detailed studies of the

size and composition of the cuts in commitments, including der will be of the basic version

planned rate of deliveries of the Tornado Multi-Role Combat the Tornado Multi-Role Combat Aircraft (MRCA).

The air transport force has now been reduced by about half, and all Comets and Britannias withdrawa from services. The size of the heli-drawa attention to the across the transport of the size of the lines).

Sir Andrew Humphrey (who is the cuts in defence the Tornado Multi-Role Combat to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Nato craft to the air-to-air refuelling share of the Lik. share of the Lik the Wessex squadron in Singa- cluding air-power, and especithe support helicopters and the theatres, the European Central

force remains adequate, but high-performance combat air- through to the 1990s. that a more economic use of craft. "Russia is spending more At the same time, work is

the support area, involving also almost probably by some in the close-support and battle of the Western world—primarily Spearheading the moves into 8-seat A-109 Hirundo (Swallow), creased payloads is important reductions in spares and alarming technological achieve-field air superiority roles. To the U.S., U.K., France, Italy the future are a number of which first deliveries are now because of the demands made understanding was signed by the control of the U.S., U.K., and U.S. and U.S reductions in spares and alarming technological achieves field air superiority roles. To the U.S., U.K., France, italy the future are a number of of which intsi deliveries are now because of the demands made understanding was signed by the engineering support, communisments. . We are just at the this end, a combined Air Staff and West Germany—the major U.S. and European probeing made to civil customers, to carry more electronics by understanding was signed by the cations and radars, and works beginning of an era of extremely Target paper has been written, emphasis is on finding new grammes, primarily military. In the U.K. Westland Heli-export, customers without schemers without schemers without schemers without schemers without schemers and alarming technological achieves need air superior to understanding was signed by the engineering support, communisments. . We are just at the this end, a combined Air Staff and West or finding new grammes, primarily military. In the U.K. Westland Heli-export, customers without schemers without schemers without schemers without schemers. The Germany and Agusta in Italy. tion of the policy of reducing which will make it possible for being studied in the aerospace requirements of both civil and in view. In the U.S., several nated manufacturer, and this developed Navy. Lynx, for support costs to the minimum, some tens of aircraft to do the industry to enable the military customers through the competitors-notably that from company is being kept outside Holland, therefore, is the basis plans for the merger of Train- same damage that would have aircraft manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond, with an the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for of the Westland submission to pean neucopter manufacturers to come 1980s and beyond the U.S. Army for the Utility the Government's plans for the Utility the Government's plant for the Utility t

Way back in 1918 Hoffmann-that's the

'H'in RHP-made the bearings

for the engines that powered

the Vicker's Vimy on the first-ever non-stop flight across the Atlantic.

Engine design has taken giant strides

forward since those pioneering days, and

aircraft including Concorde. Our latest

used in airframes and engine controls

are made by RHP too.

largest bearing manufacturer,

and its Aerospace Bearings Division

creative liaison with the customer.

RHP provides an indispensable

RHP AEROSPACE BEARINGS DIVISION

service to world aviation.

Stonehouse, Gloucestershire

RHP is Britain's

RHP bearing technology has kept pace with it.

In civil aviation, RHP bearings are essential

components of the engines in the most advanced

Jaguar and Tornado. The many different bearings

has an unsurpassed reputation in its specialised

process and inspection controls, and close and

sector of advanced technology - a reputation founded on high engineering skills, exacting

defence policy.

The task is not an easy one. It has been made clear to the track in accordance of the latest financial cuts, come in gafter a long period of per-terms that defence spending aircraft for those three counsistent whittling away of the overall has now virtually been tries, the RAF is destined to late 1980s, in which 165 will be strength, have already resulted or political purposes can only Variant for the sir defence of in substantial changes in the scheme of increase the expense of Great Britain, while the remain
nado Multi-Role Combat Air this programme has already been raised since it is likely jets, and will replace the ageing jets, and will replace the ageing sand will replace the ageing state of its likely jets, and will replace the ageing service.

Nation

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Britannias withdrawn from services). Sir Andrew has with eight of the nine protocolor of the heli-drawn attention to the control of the introduction of the context are also force has been under way for some years, business and the services. Sir Andrew has with eight of the nine protocolor, which is now on order for the being mooted, a continued pro-development is in progress. This exceptionally high morale, service. The size of the heli-drawn attention to the context are also force has been under way for some years, business to include a new medium air-to-which is now on order for the being mooted, a continued pro-development is in progress. This exceptionally high morale, which is now on order for the being mooted, a continued pro-development is in progress. This exceptionally high morale, which is now on order for the being mooted, a continued pro-development is in progress. This exception, while six pre- a major programme of improvements to includes a new medium air-to-which the introduction of the context are also force has been under way to some years, the total progress. This exception, while six pre- a major programme of improvements to includes a new medium air-to-which the introduction of the context are also force has been under way are not at the progress. This exception, while six pre- a major programme of improvements to includes a new medium air-to-which the introduction of the context are also force has been timed with the introduction of the context are also force has been timed at the progress. This exception, while six pre- a major programme of improvements to includes a new medium air-to-which the introduction of the context are also force has been timed at the progress. This exception, which is now on order for the being mooted, a continued pro- development is in progress. This exception are also force has been timed at the program and the program are also force has been timed at the program and the program are also force has been timed at the program and the program are also force has been reduced, partly by disbanding Soviet conventional forces, in bally by disbanding Soviet conventional forces, in bally by being built

pore, and further reductions in ally in that most important of engined, two-seat, supersonic placement could become a mili-discussion for some time, but naissance aircraft to enhance its eventually succeed in RAF serting the support belignment that the support belignment to the support belignment to the support of detecting classify, vice Initial development work swinging-wings combat aircraft, tary programme of major sig- although some countries, such capability of detecting, classify- vice. Initial development work and in the RAF it will progressively replace five aircraft types-the ageing Canberras, Buccaneers, Vulcan bombers Sir Andrew has said that the and Lightning fighters, and suplong-term air transport task, as a result of the need to save Soviet Union each year is build- plement and eventually also remoney and also because of ing 1,800 military aircraft—place, the Phantom combat airchanging commitments, have "enough to replace our whole craft. The RAF sees the shown that the long-term over- front line every six months or Tornado fulfilling the bulk of all size of the RAF transport so "-of which over half are its front-line combat needs

future to be faced not only with Currently, the aim is to try emerging. able savings are being found in and of increasing capability, but can replace both these aircraft, copter manufacturing countries in this category.

📨 involvement is in the

development of the

RB401 engine. Notable

applications in the military field are in the engines fitted to the Phantom, Nimrod, Harrier,

ing up, and it seems likely that worth in all more than \$4bn. These include modifications to Flash, based on the American military aircraft can only serve The Tornado is a twin the eventual Jaguar-Harrier re- (over £2.3bn.), has been under the Nimrod maritime recon- Sparrow missile, which it will to improve further.

sance rorce and the ruture supmentally undesirable has been out ianu and sea, and interport helicopter force, and a made plain repeatedly by the diction (the destruction of the reduction of up to one third in planned rate of deliveries of the Air Staff, behind the lines).

Each Tornado Multi-Role Combat

Tornado Mult

fixed-wing transport force, reductions in the size of the
Nimrod maritime reconnaisthere spending cuts is fundasance force and the future supnort heliconter force, and a

month of the dash version

for a wide range of roles, including battlefield support and
cluding battlefield support and
air superiority, tactical strike by

The preliminary RAF

The pre

# Big market for helicopters

Hughes. Kaman. Sikorsky- number of new designs. share of the emerging civil Deliveries

facturing industry is one of the most significant developments

than 22,000, with an annual ter, with a twin-engine version, granne, with 115 on titler in recent years, following the 1967 of them are looking already turnover of nearly 5500m. Their the SA-365, while the company the naval version and 103 in the Anglo-French agreement of the European needs of the following the cut is also working on the SA-350 multi-role (Army) version. So development of the Gazelle light future as a means of boosting over 10,000 aircraft, of seat helicopter which is due for craft have been built and flown. transport aircraft and the multi-which over 10,000 aircraft, of seat helicopter which is due for craft have been built and flown. transport aircraft and the multi-which over 10,000 aircraft. The production by the end of next An export order has also been role Lynx. In 1974, the assoeen exported outside Europe.

M. François Legrand, director of the Helicopter Division of Aérospatiale, one of the world's major helicopter manufac-turers, some time ago estimated the extent of the world helicopter market up to 1985 at about 28,000 aircraft, of which about 15,000 would be military machines of various kinds, and

he remainder civil aircraft.
M. Legrand further analysed his market by area, suggesting that about 42 per cent. of it would be in the U.S., about 16 per cent. in Europe and the rest from other perts of the world, including particularly the developing and th the developing countries, where the helicopter is in demand because of the lack of sophisticated surface transport systems comparable to those in many ndustrialised countries. Within the overall market, he

suggested, the American mili-tary requirements would continue to be dominant, accounting for over half of all the heiscopters bought in that country up to 1985. While M. Legrand did not put a cash acure on the value of this future world-wide civil and military helicopter market, it is esumated that together with pares it is unlikely to be worth ess than about £10bm, up to 985, based on current market prices of new helicopter types. Another significant emerging from his analysis is that the vast majority of all helicopters involved are light

3 316 2 079

At the same time, consider forces of increasing strength to find one common type that Throughout the main heli aircraft, would be likely to be in several versions, while in Westland says that develop a commercial basis rather than

plans for the merger of Train-same datage that would have interest and new order in the Government's plans for the merger of the main the German Navy, and to the defining the basis for a four increasing emphasis on the civil Tactical Transport Aircraft nationalisation of the main the German Navy, and to the company four-country industrial company. System (UTTAS) and the aerospace companies. Group U.S. Navy for the latter's collaboration in helicopter.

The market is also now Advanced Attack Helicopter turnover of the Westland Air "LAMPS" programme for a research, design, developments. characterised by an intensifica (AAH), and the U.S. Navy's craft Group, of which Westland shipborne helicopter. tion of competition, with the LAMPS programme for a light Helicopters is part, amounted to

Sikorsky S-78), and the Bell clude continued production of tinuing as a private venture official body has been set up on This emergence of an indepen YAH-63 and Hughes YAH-64 the three helicopters in the engineering development with a the government side to try to dent European helicopter manu-twin-engined aircraft for the major Anglo-French military view to possible future civil unify helicopter operational AAH programme (although so helicopter "package"—the light markets. most significant developments far as is known no direct civil Gazelle, medium tactical transforms for the world helicopter scene, with all the main companies— derivatives of the latter two port Puma and multi-role Lynx Westland has the Sea King anti-ment-industry joint working westland in the U.K., Aerosatelle, and the Gazelle totals 721 aircraft, helicopter, of which 156 have studies and reviews of helicopter. Spatiale in France, Agusta in Stage). Sikorsky is offering its the Gazelle totals 721 aircraft, helicopter, of which 156 have studies and reviews of helicopter. Sea twin-engined civil of which over 560 have been ordered, with 128 delivered engineering developments. far as is known no direct civil Gazelle, medium tactical trans-Blobm in West Germany—active helicopter, while Bell is now delivered. Westland makes so far. Derivatives of this big It is hoped, therefore, that as in preparing new models from the bell is now delivered. Westland makes so far. Derivatives of this big It is hoped, therefore, that as in preparing new models from the bell is now delivered. Westland makes so far. Derivatives of this big It is hoped, therefore, that as in preparing new models from the bell is now delivered. Westland makes so far. Derivatives of this big It is hoped, therefore, that as

than 22,000, with an annual ter, with a twin-engined version, gramme, with 113 on order in recent years, following the 1967

resources can be achieved by on military research and devel- now gathering momentum of As with many other aspects of aircraft—that is, machines with year. MBB of West Germany won for six aircraft from the ciation between Westland and increasing the numbers of opment than the whole of the the eventual replacement of the the world aviation scene, in a gross take-off weight of less has made a considerable success Royal Netherlands. Navy for Aerospatiale of France resulted VC-10s and Hercules aircraft in Western world put together. So Jaguar jet strike-trainer and the helicopters one era has come than 5 tonnes apiece. At least of its BO-105 5-seat light twin- search and rescue duties, with in the signing of a business the front-line, and disbanding we must expect in the Harrier vertical take-off fighter. to an end, and a new one is 10,500 of the military aircraft, engined helicopter, of which ten more at an increased weight agreement which defined the and about 11,000 of the civil more than 300 have been sold for the anti-submarine role.

American manufacturers—in ship-borne multi-purpose heli- over £108m in 1975-76, of which particular Bell. Boeing Vertol, copter—have already spawned a 68 per cent came from the helicopter activities, about 8 per Also as part of the develop. Aerospatiale in the design of In Europe, where the heli—These include the Boeing Ver- doors and other engineering (Canada) PT6.34 engines. This ment of the existing Puma, copter industry has over the tol twin-engined 20-seat YUH- items. Westland Helicopters development has been under while also being engaged in disciplant that initially and the Sikorsky YUH-60A employs about 7,250 of the taken in support of the civil cussions on the possibility of

remainder from environmental just flown a version of the air SA-331 Super Puma control and allied products, craft with the Pratt & Whitney helicopter and a major developfrom a base that initially 20-29 passenger helicopters in group's total of 12,600, and of Lynx (the Westland 606) pro- becoming involved in Super depended on the licence the UTTAS programme, with its output about 51 per cent. gramme which although at this Puna production as well. production of U.S. designs, the civil versions already envisaged, was exported in 1975-76. time dormant from a marketing So far as the four-country the Boeing Vertol 179 and Westland's main products in point of view, is nontheless con-agreement is concerned, at

These four leading helicopter In Europe, Aerospatiale is by Aérospatiale.

These four leading helicopter In Europe, Aerospatiale is by Aérospatiale.

The se four leading helicopter In Europe, Aerospatiale is by Aérospatiale.

The Lynx, however, is West-have been deeply involved in the major U.S. helicopter manufacturers are opened to the major unit and the major unit and

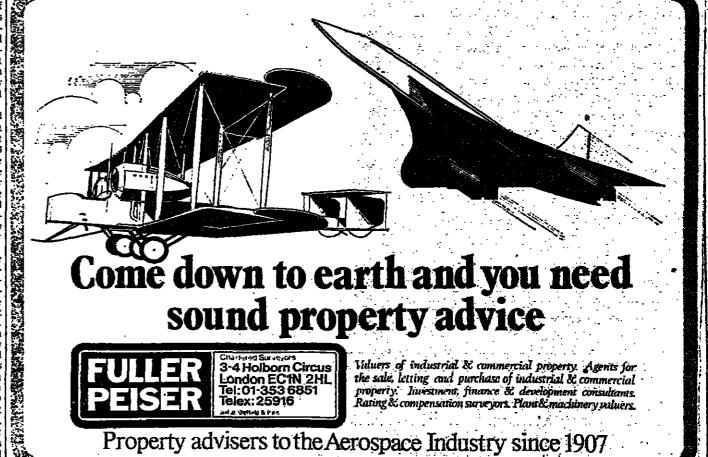
Italy Agusta has its twin-turbine ment of the Lynx to carry in on government-initiated pro-

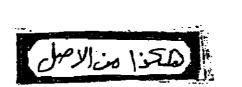
Germany and Agusta in Italy, as the other two major Eurobeen heliconter manufacturers research, design, developments and manufacture. Both the 1974 and 1975 agreements have already produced results. Westhand is in collaboration with ment of the Lyex, Westland has major items for the latter's

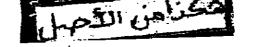
requirements for the 1980s. This:

in preparing new models from their own project offices for the future, while continuing to engage in international collation to borative ventures among them.

There form the preparing new models from the model of facturers is formidable, and







# British Airways choose the 6100 mile edition of the worlds most



# Lockheed to build a new long-range TriStar.

After many months of evaluation, British

Airways has chosen a new model of the Lockheed
L-1011 TriStar for its longer routes. Called the

Dash 500, it goes into service in 1979.

In making its decision, British Airways had more than two years of experience in operating a shorter-range model of TriStar. That model has not only been the world's most reliable\* big jet for 35 consecutive months, it also is the quietest, as certificated by the U.S. Government.

The new model adds almost 2000 miles to the range of TriStar. It means passengers will be able to enjoy TriStar reliability and comfort on nonstop routes such as London-Los Angeles, Sydney-Hong Kong and Buenos Aires-New York. The long-range TriStar will be powered by three Rolls-Royce RB.211-524 engines, each with a thrust of 50,000 pounds.

A 6100 mile TriStar. The world's most reliable big jetliner has taken a long step forward.

The world's most reliable big jetliner.

One of the technological achievements of the 55,000 workers at Lockheed.

\*Based on airline statistics covering all big wide-body jets. The statistics, which record mechanical delays and flight cancellations, reflect the ability of TriStar to operate on schedule.

# French co-operation is widespread

THE FRENCH Government's pation of France's European decision earlier this month to partners, it is understandable give the green light for the that the British aircraft indusdevelopment of a new medium- try would not be satisfied with range airliner, the Mercure 200, playing a sub-contractor's role by the two major French aircraft if it did not have any other manufacturers and McDonnell- major irons in the European Douglas of the U.S. has dispelled fire. The big question is theresome of the gloom about the fore whether full British partiindustry's future.

-no more than the go-ahead in the B-10 is still on the cards principle has been given and after the Mercure decision. the detailed financial and in- The British are sceptical It is to exceed the nine already sold French

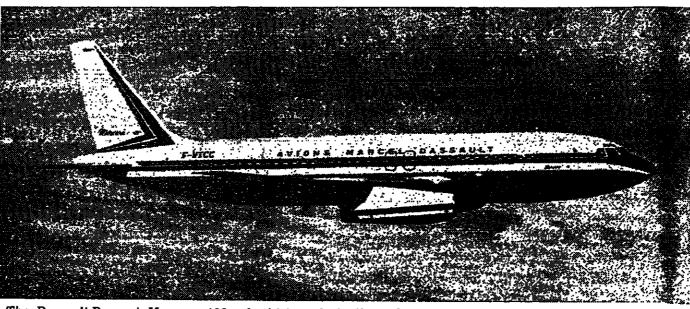
was viable only in co-operation next 10 years is considered to partners. with a U.S. manufacturer in be wildly optimistic. order to compete on the vital American market. The initial reaction from France's prosof Seven," which includes the will turn out to be justified. of Seven, which includes the will turn out to be justified.

British Aircraft Corporation, Certainly further clarification Franco-American venture. The McDonnell-Douglas is really pre-

Though it poses almost as bus and, particularly the demany problems as it has solved velopment of a smaller version,

dustrial terms for the joint pointed out in the U.K. that venture have yet to be negoti- the Mercure 200 has much the ated—it has at least cleared the same payload-range performair as to French intentions, ance as the proposed Airbus-With sales of Concorde unlikely B-10 and that in any case the to exceed the nine already sold French Government would —the prospect of China and Iran probably be reluctant to finance placing firm orders for the both ventures. Strong doubts supersonic aircraft appear to have also been expressed in have faded almost completely- Britain about the ability of the and European Airbus orders Mercure 200 to compete against unlikely to maintain their initial major rivals such as the 7X7 momentum, the industry desper family planned by Boeing, ately needed a shot in the arm, which includes a medium-Such a boost could only be range model, and the 7N7 sides of the Channel that this 800 of the new aircraft over the between

Aviation, of French intentions is required Mercure 200, a narrow-body jet Messerschmitt - Bolkow - Blohm, before the other members of which will be capable of carryinto its pockets as the French Dornier, VFW-Fokker, Aero- the "Group of Seven" can ing about 180 passengers over spatiale and Dassault-Breguet make up their minds about ranges of more than 1,700 miles, From the purely financial point to the purely These negotiations, accord their own attitude, since what will be powered by two of the ing to highly reliable sources has been announced so far new 10-tonne CFM-56 jets in Paris, had even reached the amounts to only the bare bones developed by General Electric



The Dassault-Breguet Mercure 100, of which a derivative—the Mercure 200—has been proposed by the French Government as an international programme for the future.

stage at which the British air- of a joint venture.

of the U.S. and the French Secondly, the French Governcraft industry was offered a 20 As things stand, Aerospatiale, State-owned SNECMA engines, ment appears to want the U.S.

ably mean that it would build the lion's share of 40 per cent. All this, the French Govern- any new aircraft which would the wings, as Hawker-Siddeley in the new Mercure 200 project: ment has emphasised, is no compete on the world's markets is already doing in a private McDonnell-Douglas, which will more than a decision in prin- with the European Airbus, in capacity for the Airbus A-300, market the aircraft in the U.S., ciple and conditional on the which Aérospatiale is also the Though this would amount to 15 per cent.; and Dassault-negotiation of detailed contracts major partner. On the face of half the total proposed partici- Breguet, the privately-owned between the various companies it, it seems highly improbable

Such a boost could only be range model, and the 7N7
given by a major civil aircraft derivative of the short-haul French company, a surprisingly concerned. Indeed, no one is that McDonnell-Douglas will ing and financial problems, will interest among potential purproject and it has long been Boeing 737. Dassault's claim low 5 per cent.: with the remain- in any doubt that the hurdles agree to drop its own DC-X-200, move much faster.

Chaster a market for ing 40 per cent. shared out which still remain to be cleared a short-to-medium airliner, withing the convertheless, a decision in the minage 11, the within the minage 11, the withing the minage 11, the within the various European before the project materialises out being given a much bigger principle on a future civilian tively

of view Boeing would have been a better partner

per cent. stake in the Mercure the French State-owned aircraft which are reputed for their company to give an undertaking that it will not go ahead with

for co-operation with Boeing finance and the other what arisen in the negotiation of a prevarication since the Frs.487m. (£54m.) in 1975—ing them with a fait according to the consolation prize the project which character for the purbed of the year has had a much of which can be put down have damaged the prospection of the project which character which character which character which character than year had effect on the project to the funds it has sunk into closer European appropriate. finance and the other what arisen in the negotiation of a prevarication pective European partners has admittedly been hostile, mainly because the decision because the decision because the decision will come into one or other of the communication of the purble about its other projects which chase by Belgium of more than very bad effect on the psycholoto to the funds it has sunk into closer European aeruspace could undermine the sales prospect of the Mercure 200.

The French Covernment is about its other projects which chase by Belgium of more than very bad effect on the psycholoto to the funds it has sunk into closer European aeruspace could undermine the sales prospect of the Mercure 200.

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admittedly been hostile, mainly because the decision was unilateral and because the announcement came before they themselves had taken any decisions. But they could hardly have been taken completely by surprise, since the project has long been the subject of negotiasurprise, since the project has fears concerning the French unions at Aerospatate, many or long been the subject of negotia- Government's reluctance to fin- whose own designers are likely tions within the so-called "Group ance two major new projects to find themselves without jobs. Some doubts have already been expected that the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the expected that the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the expected that the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American partner in the project. In sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be American, and who have now political considerations are all- of the French, the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sight, so it can hardly be appeared by the project in sig The engine, too, is a joint expressed by commentators in American deal, which raises decisioned to hasten their own important. France, like the whether equally complicated work-shar- As far as the French aero- civil aircraft manufacturer. Its

announcement came none too is symptomatic. soon. True, as a whole it has nological prestige which not been doing too badly. Global supersonic airliner has bis consolidated turnover in 1975 the country has always totalled Frs. 15.5bn. (about weighed its enormous country) totalled Frs. 15.5bn. £1.7bn.), up by nearly 20 per its poor sales prospects cent on 1974 (6 per cent at To throw in the towel constant exchange rates), leave the field clear for the Exports too have risen from is unthinkable as far as Frs.5.3bn. to Frs.7bn. over the French are concerned. same period, while foreign are not, however, com orders were down only slightly blinded by their desired from Frs. 10.4bn. in 1974, an national exceptionally good year, to prestige.

### Derivative

were due mainly to military they are also not average aerospace sales which, accord- joint ventures with U.S. ing to the latest statistics, make panies as long as Fu up more than half of France's interests are preserved. arms sales. Dassault, whose highly successful Mirage its cake and cat it—that family continues to ensure its co-operate with other Euro viability and whose delta-winged countries as well as going a derivative of the Mirage III, the with the joint venture. partners.

Aerospatiale, which has been obliged to give up its own plans frames and the cite of the difficulties which have French Government, whose successive annual loss—and that the French hybrid hose successive annual loss—and that the French, by pred the Frs. 487m. (£54m.) in 1975—ing them with a fait accord Government, whose successive

space industry is concerned, the attitude towards the Concerned independence Co-operation -

other European aerospace in tries has always been consi to be an acceptable altern to bankruptcy, and by thek But these satisfactory figures decision they have shown

But whether France can i favourable position. 200 project should have

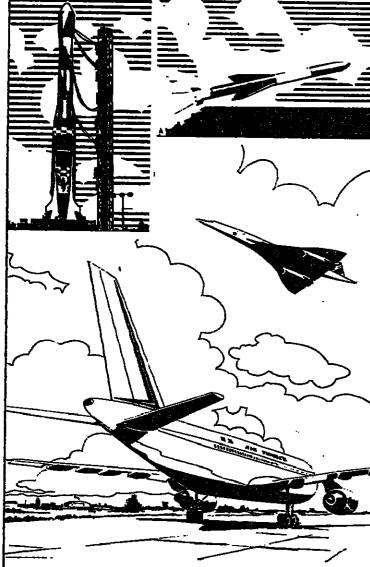
Robert Manthe

Paris Correspond

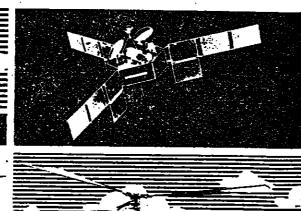
# Lags in Soviet civil development

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On display at FARNBOROUGH, Europe's most complete range of advanced technology aerospace products:







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BIG question hanging Soviet aviation over the industry this autumn is what has happened to the Tu-144, the Concordski. This Soviet supersonic transport was to have started regular internal pa ger services during the summer. following the inauguration of twice weekly cargo flights between Moscow and Alma Ata last Christmas.

Since May, however, there has been no word about plans for the airliner, reinforcing beliefs in the West that the Russians are still encountering difficulties.

These most likely centre on .000 miles) and vibration. It swing-wing (SU17).

are still moving forward was are large blanks.
the announcement in mid- The most important recent Quieter

show that its effects on the Tu-154 on longer ones. show that its effects on the Tu-154 on longer ones.

ventional Soviet-made jet. By which could afford or environment, particularly to Intercontinental routes are contrast, they seem to be more make good use of an SS ozone layer, are minimal. They mostly covered by the confident about their airframe thing about noise.

But the expansion of the Soviet-made jet. By which could afford or contrast, they seem to be more make good use of an SS or confident about their airframe thing about noise. thing about noise, or com-version of the model originally A factor of increasing con- the "largest airline in mented publicly on Concorde, introduced in the late sixties, cern to the Russians is their world" (though the size though in private they naturally with four rear-mounted engines failure to capture more of the fleet is a State secret). it welcome its growing acceptance. like the British VC-10.

technological and prestige sians first venture into air themselves along political lines, both cargo and passengers, of what is probably the largest national aircraft industry in the world (most of it shrouded in more suited to internal air Romania) Soviet sales outside secrecy and very few figures to the suit of the kus have so far generally divided useful to western airmnet themselves along political lines, both cargo and passengers. But while the West has made year. Aeroflot carried introduction into the communist passengers, and expects to world (most of it shrouded in more suited to internal air Romania) Soviet sales outside secrecy and very few figures.

view, worrying levels. The new one with seats and, interest-generation of MiG 25s, now ingly, in-flight film facilities. being widely deployed in But with a range of only Central Europe along with 1,000 miles, the II-86 will the MiG 23, has greatly scarcely answer the Russians' strengthened the Warsaw Pact's long-term needs for an aircraft fighter/interceptor capability. capable of covering the length The Su-19 "Fencer" variable and breadth of the Soviet wing fighter bomber is rated Union. However, their plans alongside the American F-111, for an aircraft of this type, while the Backfire bomber, with ideally a "jumbo," are still its range and armaments, is very vague.
classified by the West as a Two years ago it appeared major strategic weapon.

at well over 1,000 a year, ever, the talks they had been mainly of swing-wing tactical holding with Boeing and Lockthese aircraft are variations of considerable speculation in the long-standing models rather West about what the Russians than completely new types. The would do next, since they Fitter," for instance, is the plainly need a Jumbo by the only known instance in world early 1980s.

PRINCIPAL SOVIET CIVIL AIRCRAFT						
In service:	speed (mph)	range (statute miles)	maximum capacity (passengers)			
Tu-144 (SST)	1,430	4,000	140			
II-62M	540	6,600	198			
Il-76 (cargo)	520	3,500	40 tons			
Tu-154	605	1,500	164			
Yak-40	290	1,118	40			
Tu-134A	520	1,500	76-80			
Yak-12	540	1,118	100-120			
Il-86 (airbus)	600	1,000	350			
An-28 (turbojet)	220	650	15			

excessive fuel consumption aviation of an in-service fixed-(which may explain why its wing military aircraft (SU-7B) build the airframe themselves, indicated their inter

The only indication that plans craft, though even here there 524 version.

summer that supersonic fares development is the complete on Aerofiot would be the same re-equipment of Aerofiot with as sub-sonic, in the true new short and medium-haul want the engine and nothing the first piets. The old Tu-104s, commore is that they have not yet to ever, as Concorde.

secrecy and very few figures travel. This aircraft, powered captive markets have been by four wing-mounted engines, minimal.

Production of military airhas two decks, the bottom one eraft has reached impressive, for luggage (which passengers and from the West's point of load themselves) and the upper

najor strategic weapon. that they would only either the Production of military air technology or the aircraft from that they would buy either the craft is believed to be running a Western manufacturer. How-But despite the heed finally petered out last industry's advances, many of year, since when there has been It now appears that they will lines: the Poles have

arst route, to Alma Ata, is only being modified later into a but power it with Western equipping the national engines. Rolls-Royce has been Lot with U.S. aircraft.) is impossible to be certain. Little is known, for obvious negotiating for a long period to however, since the aircraft has reasons, about plans. The sell the RB-211, and a deal of unlucky with their late been kept well away from Russians have been more open some kind is still on the cards, duct, the Tu-154. A r Western eyes for some months, about the plans for civil air- possibly for the uprated Dash

The reason why the Russians prospects for the expe The Russians have also parable in many ways to the mastered advanced civil jet ever. as Concorde's maker cautiously begun to enter the Comet, were finally phased out engines of the RB-211 type found, it is not exactly at controversy over supersonic last year and replaced by the which are both quieter and there are fight by producing supersonic last year and replaced by the which are both quieter and there are flight by producing evidence to Tu-134 for short routes and the more economical than the con-

world aviation market. Rightly direct to 90 international Shrouded

In the coming years, the Russor wrongly, they see the future nations, the latest being Most important though the Tu-144 is to the Russians for technological and prestige with the size of the world aircraft industry bique, as from July. Russians for a year. This will be the Russians for technological and prestige with the size of the world aircraft industry bique, as from July. Russians for a year. This will be the Russians for technological and prestige with the Russians for the meaning representations.

The neat 40-seat for the Yak 40, on which sians pinned high b cause of its undoubteand versatility, has achieved only iainiy to itaiy.

The problem is pa of reputation. Soviet ogy is still viewed w picion, especially when to entrusting one's lif But it is also one of The performance and f sumption of most Sov aircraft are below expectations. (There ha been reports of dissati among the East Europe

are known to have crashing the short time the been in operation.

Presumably there mu Tu-144s, since there is on flot's network continues.

David Lasce East Europe Correspon

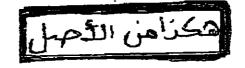
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# Airports fail to ease congestion problems.

WITH the resumption of air from the environmentalists' have considerable expertise in major new developments a assenger and cargo traffic viewpoint, regardless of the airport construction and opera- Edinburgh (including a new growth-albeit at a slower rate economic benefits that can tion. as the industrial recession ultimately be derived from such. A new group has also been and at Aberdeen, while the Civil and the industrial recession municipal desired that some formed, called British Airport Aviation Authority; which as vere confronting the world air major airport developments Equipment (comprising Relithe responsibility for the social some formed, comprising Relithe responsibility for the social ransport industry before the have been permanently aban-ance-Mercury of Halifax. Albar services airports in the Scotecession began are likely to doned—the Maplin project in Engineering of Keighley, ACS tish Highlands and Islands, has
eturn, and especially so where the U.K. is a case in point, Engineering Sales of Stamford, also been spending heavily on overnments and regulatory although here the cost of such Norwich. Coachworks of improving many of these, especi-uthorities have not used the a venture in terms of money Norwich, and Power Lifts of ally for example Sumburgh in ntervening period of respite to and other resources was also a Watford) to offer a complete the Shetlands, to meet the grow eview and improve their avia- significant factor in the decision, range of equipment for new air-ing needs of the North Sea oil

agaibliu :

### helved

nd re-examined.

ralised countries of Western designers and operators.

These environmental and ports world-wide, but especially and gas industries. One of these problem areas resource-conservation . factors in countries of the Third World. The major developments is that of airports. It was a are also fundamental in dictatroblem before the recession in ing that in the U.K. such airport Total spending countries, because the rate developments as are already

looked as though the reces- Airports. Authority, which is 1980s. on was going to be ong and drawing heavily on the develop. The BAA developments, for year by the mid-1980s, however, 1990.

Because of the long "lead sep, must now be dusted off ment of its "show-piece" airport example, are aimed at making it is already clear that a fourth. It is to try to verify these times "involved in the develop-

f passenger traffic growth, aver-taking place, or will eventually While no official figures are raise its capacity from the ging 12 to 15 per cent. a year, take place, will be concentrated available for the current volume present 6m. passengers a year as forcing more and more pas- so far as possible within the of airport development world to the envisaged 16m, embodyengers and aircraft into an confines of existing airport wide, it has been estimated that ing new departures and arrivals inports system that was not boundaries, with the emphasis total spending on new airports facilities, together with extenexpanding at the same rate upon squeezing maximum is not likely to be less than sive major roadworks and car coupled with increasing pres-utilisation from existing run-fibn, between now and 1990, parking facilities. It is This is because such a terminal develop the necessary domestic runway. In fact, it of about 20 stands for wide the regional airports. representing saturation of run "green-field" airport develop could probably be multiplied would not now be possible bodied alrers if developed for These documents have been would have to be on the Perry and international services with physically for a second runway long-haul traffic, or 25 stands criticised by some people as Oaks site to the west of the which to stimulate that traffic.

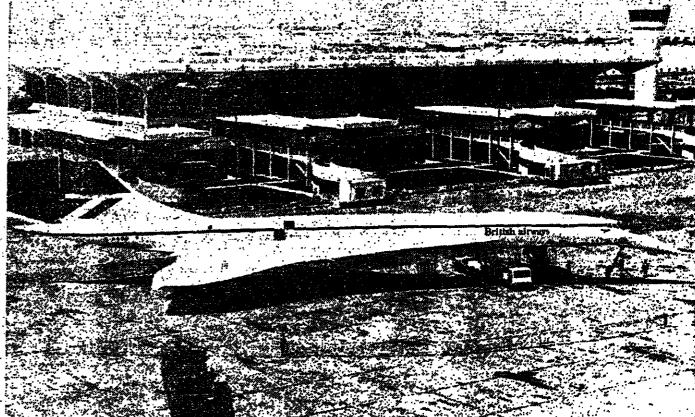
maintained that the air trans port boundary, since the avail work. East. South America, Africa, growth would be resumed. As cargo terminal. and 1981-many of the world's Authority, which is acting in a ing is designed to ensure that, end of next year, and substant well-founded. For example, evolved in sufficient time to develop rport problems are bound to consultancy role in various notwithstanding the slower rate tial modifications and extensions some forecasts have suggested avoid having to implement unterminal at Gatwick, to raise is likely to be, say, in ten to consultancy role in various notwithstanding the slower rate tial modifications and extensions some forecasts have suggested avoid having to implement unterminal at Gatwick, to raise is likely to be, say, in ten to terminal at Gatwick, to raise is likely to be, say, in ten to the consultancy role in various plans overseas countries. In this field, of growth in traffic, the major to the existing three terminal that the traffic at the four South satisfactory emergency ad hoc that airport's capacity to 25m. The Government has outlined or new airports or the expan- it is in competition with other U.K. airports will remain cap buildings. on of facilities at existing major airport, authorities, able of meeting all the demands. To make Heathrow capable 70m. a year by the mid-1980s, tes, conveniently shelved when notably the very active Paris placed upon them up to the mid- of bandling even its planned rising thereafter to reach as Sludge Works

at Roissy (Charles de Gaulle) in Heathrow capable of handling passenger terminal will be longer-term forecasts, and to dis-ment of any new airport, much is to foster a policy of major mental and amenity groups, as In some countries, especially its bid to become one of the 38m. passengers a year by required, highly developed indus world's most influential airport 1985, Gatwick 16m., and Stan-studies have been made for demand posed by traffic figures have to be undertaken after south-east airports into those ments—to conduct the debate urope and the U.S., the In the U.K., companies such area, Luton Corporation is de the south side of the airport, that the U.K. Government has years immediately ahead. For Birmingham, Glasgow and defined airports policy that is evelopment of new "green as International Aeradio (which veloping Luten airport to handle The final decision to go shead embarked upon a long consultate example, it will have to be Edinburgh, enough time must acceptable to all will emerge. old" airports has come to be is owned by a consortium of 3m. passengers a year. In addition of 3m. passengers a year. In addition of only

terminal and a new runway)

already undertaken or in progress include a substantial re-design of Gatwick Airport, to

capacity of 38m. passengers a much as 100m. a year or so by stead 1m. Also in the London such a terminal to be built on of the magnitude anticipated, 1985 must be done in the elsewhere, such as Manchester, from which it is hoped a clearly-



Concorde at Dubai Airport.

East airports alone might reach decisions in the 1980s.

wees from environmental lob ways and expanding only the and may well be considerably significant that at Gatwick, the planning suggests that it will consultation documents have passenger terminal will be developed to meet the anticilies for the restriction of both passenger-handling and other more, while if the sums that planned expansion is to be con- eventually be required to been published, one relating to needed at Heathrow to raise pated expansion, but also to ew airport developments and terminal facilities. While it is will be spent in improving the tained within the existing air- handle hetween 6m and 8m the problems of South-East Eng- that airport's total capacity to enable the U.K. and foreign

and preliminary cover ways of meeting the of the planning for what may diversion of traffic from the well as Government Depart-

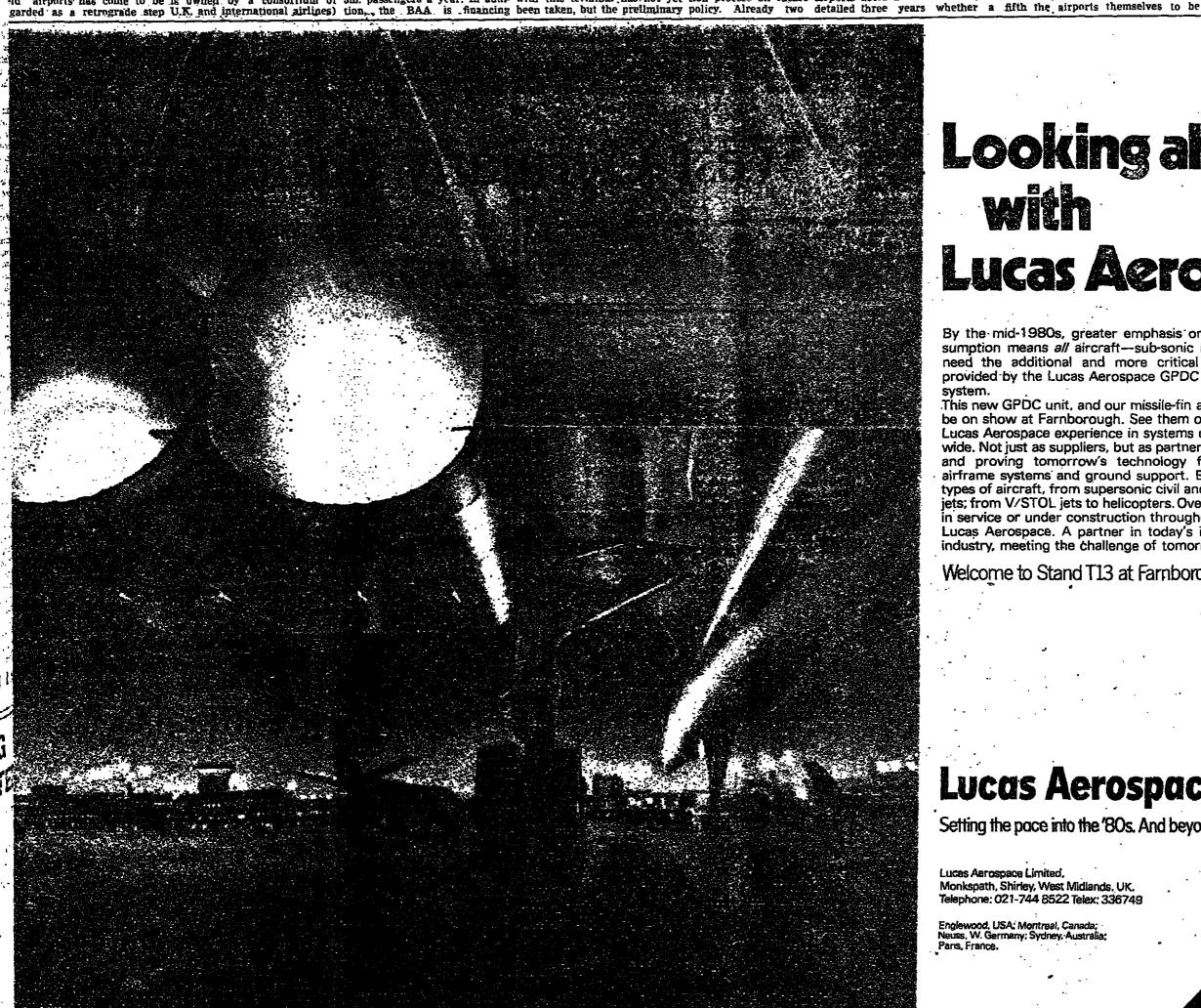
physically for a second runway long-haul traffic, or 25 stands criticised by some people as Oaks site to the west of the which to stimulate that traffic.

Airports to be built at Gatwick without (including 12 for wide-bodies) being inconclusive about future airport, involving the removal. This is what the current To certain times of day, and fre-thinking does not envisage such. The British Airports to be built at Gatwick without (including 12 for wide-bodies) being inconclusive about future airport, involving the removal. This is what the current found congestion in terminal a development in the foresee Authority itself has always going outside the existing air. if developed for short-haul airport strategy in the U.K. This of the existing sludge works. search for a long-term airports criticism, however, misses the This development would strategy in the U.K. is all about. In many other parts of the port recession would be tempo. able land area is already being These developments are whole point of the debate— probably take about 12 years, The publication by the Govern-world, however—the Middle rary, and that sooner or later built upon to provide the new either already under way, or are which is to get as many views so that even if a decision to ment of the two consultation envisaged, to meet the antici- 23 possible on what is likely to do it were taken in, say, 1983 documents represents a frank Now that the expansion in South-East Asia—the develop a result, it has been spending At . Heathrow, the new pated growth by 1985. It is be happen, and what the reactions (when it might become reason admission that the situation is orld air transport is being re-ment of new airports continues substantial sums on improving facilities include the extension youd that date that some signi- to those events are likely to be, ably clear what the rate of air wide open, with no one able to simed—with an expected apace, providing substantial out- facilities at all its airports, with of the London Transport Under. Blank further problems seem from the variety of the state with precision just what imed—with an expected apace, providing substantial out- facilities at all its airports, with of the London Transport Under norm the winest possible traine growth was likely to be made apace, providing substantial out- facilities at all its airports, with of the London Transport Under norm the winest possible traine growth was likely to be made apace, providing substantial out- facilities at all its airports, with of the London Transport Under norm the winest providing substantial out- facilities at all its airports, with of the London Transport Under norm the winest providing substantial out- facilities at all its airports, with of the London Transport Under norm the winest providing substantial out- facilities at all its airports, with of the London Transport Under norm the likely to occur, especially if the range of interested parties, so through the rest of the 1980s), the state of world air traffic deposition of the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports, with of the London Transport Under norm the substantial out- facilities at all its airports with the substantial out- facilities at all its airports which is a long to the substantial out- facilities at all its airports with the substantial out- facilities at all its airports with the substantial out- facilities at all its airports with the substantial out- facilities at all its airports with the substantial

> Because of the long "lead be ready until 1990. Similarly, if the Government

second major U.K. and the rest of the world.

passengers a year, would take the options as it sees them. It started in 1983 it would not is now up to the various interested parties-airlines, aircraft manufacturers, local authori-



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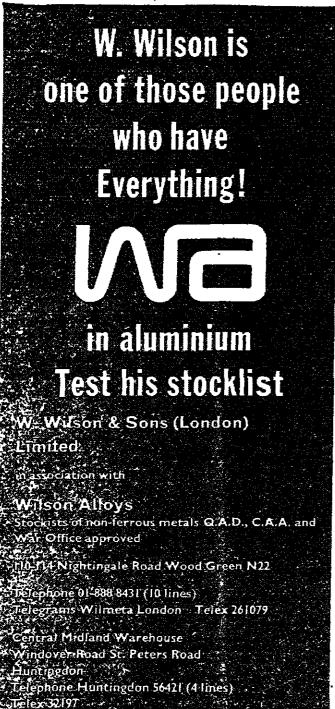
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THE GOAD VICENESS OF SOME WORLD STUDBER 1999 OF COMPARABLES

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# Italy's civil market stake

strated how difficult it is to build up a modern industry without determined political and financial backing by the and civil aircraft and helicop ters, have done extremely well and have excellent export-based order books for new products. But the State-owned sector is badly in need of, first, firm new orders for military aircraft; secondly, a recovery in world civil aircraft orders sufficient to persuade its major partner Boeing to go-ahead finally with the 7X7 project; and thirdly, a thorough-going re-organisation to give a more rational shape to its present unco-ordinated

For decades Italy has spent smaller percentage of its GNP on defence than any of its Nato partners and this has led to, among other things, an extremely low level of spending on new equipment. The bulk of the already inadequate defence allocation has inevitably been eaten up by wages, salaries and

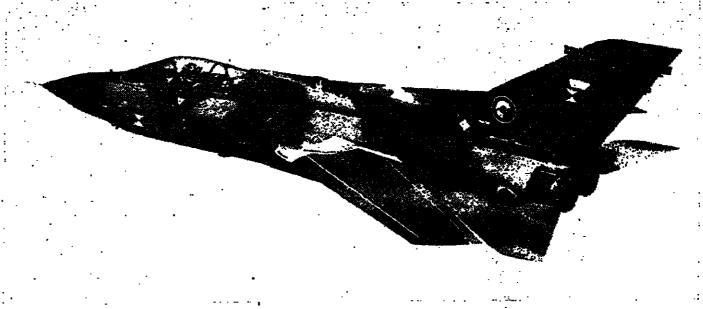
current expenditure of all kinds.

To remedy this the Ministry for the modernisation of all three services. The Navy modernisation plan has already been military transport, the G-91Y for the McDunnell-Douglas DC9

Delay has been a victim of political year Aeritalia, formed five years Turin. instability. This instability reason by the merger of Fiat's airsulted in two Government crises frame interests with those of 150bn. and early general elections the IRI-Finmeccanica group, last June, followed by lost a further L19.9bn., so bringnew government. All this up to L67.5bn. meant that legislative activity has been practically impossible over the whole of 1976 Essential so far, and the Air Force Modernisation Bill is one of many urgently awaiting approval by by high interest charges, underthe new Parliament which utilisation of capacity, the writ-

650 units in ten countries.

The Bill has the backing of all projected capital increase. Parliament in October. This will allow the Italian Government to place a firm order for the 100 MRCA Tornados which will in turn ensure major contracts for Acritalia and other sub-contractors which were given the task of making the variable geometry wings which are the key to the Tornado's success.



The variable geometry wings of the MRCA Tornado are the product of Italian design and construction.

their ability to resolve complex fresh life into the military acti-assure the company access to the aircraft.

Italian egineering. approved by Parliament and is fighter and the Lockheed Star- and DC-10 at Pomigliano d'Arco in operation. The Air Force fighter F-104 S, all of which are near Naples, and panels for the lengthy negotiations to form ing its total accumulated losses

ing-off of research work done The Bill, which provides for in connection with the aban-tinuing its search for other cent by not subscribing to the new partner.

the political parties including. Orders in connection with the clearly hopes that participation made leasing uneconomic and while Aermacchi is well placed the Communists, and is ex. MRCA Tornado will breathe in the 7X7 project will finally Alitalia has now decided to buy to follow up its highly success-

ination and dexterity which has heavily on realisation of the nology and fully establish the generation airliner to its already helicopter long characterised the best of Boeing 7X7 project for future group as a viable partner in mixed Douglas. Boeing and having established itself work on the civil side. Up to future European or Transatlan- Caravelle fleet in a move which the basis of licensing arms Aeritalia desperately needs now it has survived principally tic aircraft building consortia.

modernisation plan, however, coming rapidly to an end. Last Dassault Mercure aircraft at suffered from the delay in ing problems in the meantime. licence. the money will not actually be into STOL aircraft in the will be a great relief.

tor a country anxious to dew new technology sectors to emproduction of its own STOL Whether Aeritalia will ever its survival as an advantage of the section of its own stock of the section of the sectio

the expenditure of L1.265bn, doned STOL project with partners in the TXT and the expenditure of L1.265bn, doned STOL project with partners in the TXT and the lapanese Civil Jet Transport Development Corporation has the key to two major projects, make it essential for share. The first is the Tornado MRCA holders to write down the lapanese Civil Jet Transport Development Corporation has the lapanes the key to two major projects, make it essential for share-to-folding and the first is the Tornado MRCA holders to write down the to join the consortium. But stretched versions of existing private aerospace companies, that this is now recognised combat aircraft, of which the capital and inject fresh funds, this depends on final approval combat aircraft, of which the capital and inject fresh funds, this depends on final approval older, generation aircraft—in-Rinaldo Piaggio of Genoa and the public sector of the inductional forms are increasing as stretched versions of existing private aerospace companies, that this is now recognised older, generation aircraft—in-Rinaldo Piaggio of Genoa and the public sector of the induction of the principal but there are increasing as stretched versions of existing private aerospace companies, that this is now recognised older, generation aircraft—in-Rinaldo Piaggio of Genoa and the public sector of the induction of the principal but there are increasing as the first is the Tornado MRCA holders to write down the to join the consortium. But stretched versions of existing private aerospace companies, that this is now recognised to leave the public sector of the induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as the first induction of the principal but there are increasing as

problems with the sort of imag- vities of Aeritalia but it relies advanced civilian aircraft tech- Alitalia has added another old achievement for the lts

Parliament has set aside hand is believed by aerospace cerned, however, the day when ltaly's determination to estab 150bn. Lire to finance Aeritalia's circles here to have benefited the MRCA and 7X7 projects a viable aerospace industry participation in the 7X7 but participation in the 7X7, but from jointly financed research move into the production phase

is defined and put into opera- military aircraft, which has just make any profits from its acti- industrial country. But in ou tion. It is earmarked mainly made its maiden flight, and also vities remains to be seen but it to make the best out of for construction of new as to have made use of its links should be remembered that the human and technical reson sembly facilities at Foggia, but, with IRI-Finmeccanica to con- decision to set up the group was available the industry needs i contrary to earlier reports, dition the aircraft procurement essentially a strategic one better access to capital an The losses, caused principally this remains only at the project policies of Alitalia, the Italian aimed at giving Italy a subconsiderable rationalisation. civil airline, which is also con-stantial presence in the high Meanwhile Boeing is con-trolled by IRI.

critics claim is likely to improve ments from all the major Boeing's chances of eventually producers, has now develo selling the 7X7 as a replace-sufficient skills to design ment aircraft to Alitalia for the produce its own helicopters 1980s, but will also add to well as adding its own rel But Aeritalia has clearly Alitalia's already severe operat- ments to models made in

technology world of aerospace, sector Faced with the need to re- a presence which it was always

Italian Air Force is pledged to But Fiat, having originally Acrospace Council. Boeing is of which were offered on a Milan, are doing very well—as ally into some kind of "I new jet trainer in anticipation ideal way of hiving off its loss- also believed to be looking for leasing basis. Alitalia chose the is, the Agusta helicopter group. Acres," or aeronauties hold of which Aermarchi has premaking airframe activities, is another European partner and latter—although this choice has now run by the State-controlled company, within the will be acrospace industry sources here. pared a new model, the MB-339 very reluctant to inject fresh aerospace industry sources here been heavily criticised in Italian Efim-Breda finance company, overall context of that rethe replace the highly successful cash and intends to reduce its indicate the West German MBB aerospace circles, according to Piaggio has just put new life ing of the role of State on to replace the nighty successful cash and intends to reduce its as the most likely prospective leady's most authoritative aero- into its P-166 multi-use light prises currently taking place.

MB-326. which has sold over holding from the original 50 per as the most likely prospective Italy's most authoritative aero- into its P-166 multi-use light prises currently taking place. space news report Air Press. transport by replacing the old Italy. In the long run Aeritalia Iira devaluation subsequently piston engines with turbo-props.

bomber with the new MR which has just made its mat flight and will be shown in nationally for the first time

Farnborough. Aermarchi initially has on the L100hn, set aside. new trainers in the Italian Force renewal programme hopes to use this as a solid to repeat the export succe achieved with the MB-328 has also obtained the Teled licence to produce the Fire "drone" for sale to Nato for Last year Aermacchi expor

aircraft and equipment we

L26.8bn., over 70 per col its L33.8bn. turnover.

The Agusta helicopter gr also reported higher turns of L158bn, of which pai company Agusta accounted 1.97bn., up 31 per cent reported a net profit of LI12 substantial orders from Iran Chinook helicopters made ur licence and also orders for own Agusta 109 model

Anthony Robins

# West Germany disillusioned

as a tribute to Italian aero-Aerospatiale of France plan to the Americans, and how the topic of nautical engineering skills that join forces with McDonnell days of "everybody with somethis most difficult part of the airceraft was contracted out to

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180-seat version of the ansuc self" were now over. Ludwig cessful Mercure 100 has shat Boelkow, the chief executive of tered three months of uneasy West Germany's largest aeroillusion in the West German air- space company, Messerschmidt- engaged: the Airbus is funda-

May. All the talk there was of with the Mercure 200. From a as the kernel of future Euro. The Gruener report sought to medium term remain large the way that the Group of Seven European point of view the best pean co-operation in civil air establish what value West Gerdependent on the flow of pub.

In many ways it can be taken. THE NEWS that Dassault anding a joint production deal with directed some urgency into the Government start negotiations interests of greater effects.

craft industry. The main illu- Boelkow-Blohm, predicted unsion was that the "Airbus," a equivocally that: "We will now ment's plans for the German dustry currently employs 45,000 relations with other Europe built by a Franch Comman companies. sion was that the "Airbus," a equivocally that: "We will now steen the choically successful aircraft built by a French-German consortium with British participation, was to be scaled down to provide a new smaller model in co-operation with Boeing of the U.S., and would thus become is now interested in participation to win wide acceptance on both sides of the Atlantic.

The false hopes were broadcast to some extent by the mood of transatlantic co-operation that shareholding, and with BAC of civil aircraft. It regarded this was prevalent at the Hanover May and the development of Air Show at the beginning of model in direct competition a "family" of aircraft from it.

May. All the talk there was of May voices are speaking Martin Gruener, a Secretary of State in the Bonn Economics State in the Bonn Economics State in the Bonn Economics ocuntries, and that the cost of the state in the Bonn Economics ocuntries, and that the cost of the state in the social provide a report on the German aerospace industry. Last November Herr Martin Gruener, a Secretary of State in the Bonn Economics ocuntries, and that the cost of the state in the Bonn Economics ocuntries, and that the cost of the state in the social provide a report on the German aerospace industry of the previous year. This was not really due to the recession, but to a slow-down in the flow of orders from the public sector. 85 per cent of the industry: the cost of provide a basis for the order of the previous year. This would not be much iess the provide a basis for the order of the previous year. This would not be much iess the provide a slow-down in the flow of orders from the public sector. 85 per cent of the industry: the cost of provide a provide a report on the state in the Social provide a basis for the order of the previous year. This would not be much iess the provide a report on the state in the flow of the previous year. This would not be much iess the provide a provi

transatlantic co- aimed at bringing the British ness. The main justifications and Italian Governments into continuing operations in

say that it was inevitable that rationalisation with 24 sepan the report ended up by suggest- works. many with overlapping ing that the status quo should functions; be maintained, provided there (D) That the companies we

dustry had already becomevolved was that the indus forced the pace of technologi innovation in German indបង្

were changes in the way the in- not all arranged to sell land dustry organised itself in the scale technology, in that a but

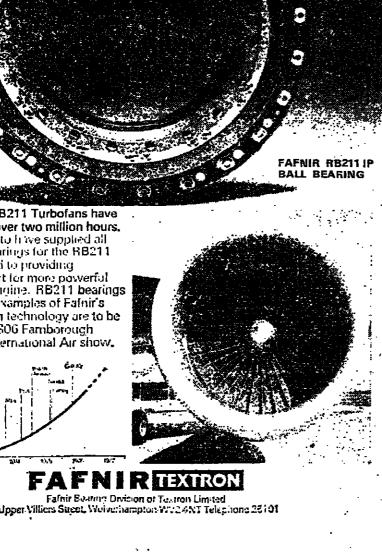
CONTINUED ON NEXT PAGE



هكذامن الأصل

The Franco-German Alpha-Jet light jet trainer and combat aircraft.





# Swedish industry awaits big order

ent programme, involving a the four-nation Nato order. eision on whether Saab-Scania managing direc-

e end of the '80s. tainst the domestic developnkoeping headquarters.

aft manufacturing capacity Facilities

r. Eric Holmqvist, remarked new aircraft of its own. ughly all alternatives to the the S-105-of the SK-60.

VEDENS AEROSPACE development of a new Swedish dustry is fast approaching a aircraft. A Swedish team stershed. By next spring the earlier this year visited the w Swedish Parliament to be Fort Worth headquarters of ected on September 19 this General Dynamics of the U.S., ar will have to authorise the producer of the F-16 which last at five-year defence procure- year won the competition for

ania shall be given the go tor Kurt Miliekowsky has tead to develop and produce a stressed, however, that the issue shtweight strike/trainer air remains open. Mr. Miliekowsky aft for the Swedish Air Force reacted promptly to suggestions replace the Viggen towards from senior Air Force officers that an eventual replacement Much will depend on the for the Viggen would have to commendations of the Parliaentary Defence Commission plier, in order to obtain the nich has been sitting since quantity needed, by underlin-74 and which will report ing the credibility which the ter the election. A decision domestic zerospace industry lainst the domestic develoption lends to Sweden's policy of ent of a new aircraft would neutrality and its importance for the country's industrial extab-Scania's aerospace divi-on and, most pertinently, the adual laying-off of the 2,000-tong research for the 2,000rong research and develop-ent staff at the company's abroad or manufacture under nkoeping beadquarters.

Over the past few months the bate within the Swedish craft. No definitive cost calculators and political establish. ilitary and political establish-ents over the desirability of published.

maintain a credible defence of a foreign interceptor to re- Parliamentary thinking on de- engine. cularly apparent in air Such a programme would prob- Socialist parties which would order to go ahead with the de- industry as a whole is that they to obtain export orders, in take up to two tons of freight will retain its own development ably help to maintain Saab- form a government only the velopment and production of a have to spread soaring develop- order to lengthen the production or 19 passengers and to operate capacity.

A pointer to Government Scania's production facilities Moderates (Conservatives) are new strike version based on the ment costs over steadily con- series and reduce unit costs, but from short air strips under inking may have come last but would involve far less de- likely to stand firm for the more powerful JA-37. Develop- tracting production series, Swedish neutrality—the original greatly varying climatic conditions, when a request from the velopment work than the preservation of an independent ment of this new strike Viggen. When the Viggen was first motive for the building up of tions. Other Swedish companies

Nordic Correspondent efence Procurement Board strike/trainer project, designa- Swedish aircraft capacity. The FMV) for funds to research ted B3-LA, and would almost Centre Party and Liberal reprene new aircraft was turned certainly entail the reduction of sentatives on the Defence Comown and the Defence Minister, the company's ability to develop mission appear to have concur

12t the Board and Saab-Scania Development costs for a Democrats' views. ere trying to push ahead trainer to replace the SK-60 are stressed, however, that the Comster than the Government was put at some Kr. 100m. (£12.5m.) mission has called for complerepared to decide. At the against Kr.1.52bn. (£190m, mentary information on the ime time both the Air Force £250m.) for the B3-LA. Saab- possibilities and costs of alternnd the Board bave been in Scania has already developed atives and has not yet formulatructed to investigate thor- an advanced export version— ted its recommendations.



SAAB Viggen all-weather attack aircraft.

red in the main with the Social

which it is putting forward, in competition with the Bayer of the first version supplies has been an ciomatic part of Swedish majority has been leaning to the Finnish Air Force.

Tachings

which it is putting forward, in competition with the Hawker of the Viggen, the AJ-37 strike together provide enough work aligned, production in the Eakages from the Defence Commission suggest that its industry. It is most probable that production with the grow-utrality, but with the grow-general and its Safari civil version.

The possibility that the September of the first version of the Viggen, the AJ-37 strike together provide enough work alignt, production and resing cost of the Viggen, the AJ-37 strike together provide enough work alignt production of the Swedish aerospace commission suggest that its fideley Hawk and the French Alpha-let, for an order from the Finnish Air Force.

The possibility that the September of the first version of the Viggen, the AJ-37 strike together provide enough work alignt, production of the Swedish aerospace commission of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together provide enough work alignt production of the Viggen, the AJ-37 strike together with its for its 2,000-strong research and its Safari civil version.

More recently it has been under strangent production the enough work alignt production of the Production of the Production of the Viggen, the AJ-37 strike together provide enough work alignt production of the First production of the Institute of the The problem for Saab-Scania 60s and the early 80s.

in this instance a daunting vide project packages based on handicap. Sweden's own political the use of the aircraft. One inrestrictive on exports of air fields or forests by the Transcraft such as the Viggen than, porter.
for instance, on exports of Last year Saab-Scania received ment, when it was reported that decisions next spring. they were being used against

Saab-Scania has not ignored Foreign design guerillas in Baluchistan. civil projects but its ability to It is certain that in designdevelop remunerative civil air- ing this package they will try craft has so far been circum- to retain as large a proportion scribed. It was involved in the of "independence" in weapon Europlane project, abandoned in supplies as Sweden can afford. 1974, but has not since suc-Whether the mix provides for ceeded in reaching agreement development of a new Swedish with any other manufacturer on aircraft or for production of a joint production of a civil air- foreign design under licence, eraft. It has scored a minor there will be a future involvsuccess with its MFI-17 Sup- ing profitable work of some

a third between the end of the by four piston or two turbo Viggen. The big question to be prop engines, it has been named settled next year, however, is sture. This conflict is par- place the Viggen in the 90s. fence. Among the three non-

the domestic industry-becomes have been called in to help proties on the sale abroad of volves plant to produce fertiliser 'offensive" weapons are more from city sewage to be spread on

Bofors anti-aircraft guns des- the go-ahead for the developpite successful sales to Den-ment of a new air-to-air missile, mark. Finland and Austria originally designated the Saab And past incidents-notably 372, for the JA-37 intercuptor the stopping of supplies of version of the Viggen, but shells for Swedish mortar rifles further development of new used by the Australian Army in domestic missile weaponry. Vietnam-have harmed the cre- whether by Saab-Scania or dibility of Swedish arms exports. Bofors, will depend on the total Earlier this year the sale of 40 defence package which emerges Saab Supporters to Pakistan was from the Defence Commission's queried in the Swedish Parlia-ponderings and Parliament's

which it has sold to Austria and is that it is approaching the end and of a replacement for the mooted, production of some 800 porter, a rugged, light, piston-kind for the Swedish aerospace which it is putting forward, in of deliveries of the first version SK-60 trainer would not aircraft was anticipated for the engined army support aircraft industry. It is most probable

### West Germany CONTINUED FROM PREVIOUS PAGE

Low San Ro

2) That the industry was mercial 7) That shareholders tended consists of to-day.

an a national basis.

isiness. He named the MRCA for anti-tank missiles. ngramme (the Tornado multiie Combat Aircraft), the Missiles ipha-Jet strike/trainer airany's space involvement.

ound—it merely confirmed with Aerospatiale of France. America.

not was going on already— MBB's problem is its employ— VFW-Fokker also builds the

1955 that the designers of year, though its turnover was

ten found it hard to pin down West Germany's war-time air- sharply down to DM377m. The ho, ultimtaely, would take craft were again allowed to get mainstay of this company's actiequasibility for the delivery back into the aircraft business, vities is the Alpha-Jet, a close idercapitalised and therefore financial floundering led to the of France. Series production of a poor position to finance consolidation of the industry this aircraft is now getting oduct development internally; into the three groups that it under way and with 400 units

Messerschmitt-Boelkow-Blohm turing capacity will be well After rejecting the possibility with a total workforce of just used for a few years. Dornier radical surgery Herr Gruener under 20,000 and turnover in is also the producer of the only id down the following aims 1975 of DM1.5bn., of which some other privately developed and government aerospace 1bn. was paid by the Govern-commercially successful aircraft ment. Although undercapitalised produced by the German aero-To create a competitive aero- and heavily dependent on the space industry since the war, are industry, which does not. Government for business, MBB the Skyservant two-engine swever, attempt to match the is well-supplied with contracts utility aircraft. In 1975 Dornier merican industry right across and should increase its total employed a total of 6,700 people. turnover to around DM3bn. by The third West German aero-To develop existing European 1980. Its most obvious success space concern is the German/ nks further. has been the BO-105 helicopter Dutch company VFW-Fokker To seek transatlantic partner- of which it has now sold 300 and which was formed by a merger

puld remain the core of Ger is marketing a number of U.S. Coastguard have till now successful anti-tank and anti- been thwarted by what appears None of this broke much new aircraft missiles in partnership to be protectionist reluctance in

ese efforts would only be is dependent on civil aircraft has sold 113, and the very tanceable in the long term if construction and specifically the successful F-27 turboprop for anges took place. The report Airbus, MBB is involved in this which there is still a lively through its 65 per cent, holding demand 20 years after its intro-Greater degree of weapons in Deutsche Airbus which, in duction. It, 100, is involved in turn, has a 47.9 per cent. hold- the German contribution to the More talk about a "two-way ing in the international Airbus Airbus programme, with a 35 reel" in weapons co-operation project. MBB employs over per cent. holding in Deutsche th the U.S.:

5,000 people near Hamburg and Airbus.

A greater degree of co- it is out of fear for their The costs associated with this eration between the European job security that the City of line of civil aircraft and the cline companies and European Hamburg recently 0,2025 unsatisfactory degree of job rline companies and European Hamburg recently outbid unsatisfactory degree of job anulacturers in organising Munich in taking over a 20.25 security that they generate are we civil projects; per cent. stake in MBB from the the company's key problem. Talks with America about Blohm family. Having thus VFW-Fokker made a profit in operation in the civil air gained some influence in the 1975 of DM5.8m., but in 1976 MBB supervisory board Ham- and 1977 only break-even is

the most appealing from an These are strongly denied by German industry to entrepreneurial point of view, the management. nich these thoughts apply is is Dornier. The family-owned 20 years old. It was only company returned a profit last

Fifteen years of not very com- support and training jet, deinventiveness and veloped with Dassault/Breguet already ordered by France and be inconstant because of The largest of the three West West Germany, and a further 33 criapping or conflicting busi- German aerospace companies is by Belgium, Dornier's manufac-

up as a flanking measure—if has delivered 260. This light in 1969 after nine years of issible on a European rather helicopter with fixed, rather increasing co-operation. Total than hinged, rotor blades has sales last year were up by 15 He fleshed out these rather found wide acceptance and will per cent. to DM1.59bn. There igue aims by citing the airbus shortly be introduced by the are 18,000 people on the comthe vehicle for European co- German armed forces in the pany's payroll. VFW-Fokker is the venticle for European to German armed forces in the most problematic of the siness. He named the MRCA for anti-tank missiles.

German companies in this business. Part of its trouble is due to the fact that only a relatively small part of its turnover, 33 aft, and missile systems as MBB is also the main German per cent., is derived from e core of German efforts in contractor for the MRCA and weapon sales. The bulk comes e military aerospace business, now this vast contract had been from a series of technically e said that Germany's under given the production go-ahead it successful but commercially kings for the European Space will be a steady factor in MBB's vulnerable ventures in the civil sency, including Spacelab and employment. Another area of aircraft field. So far the comriane, together with the deve. military production with good pany has sold only 16 of its 44. pment of communication prospects is the missile business seater jet-the VFW-614. Hopes tellites and ground stations, where MBB has developed and for sale of this aircraft to the

in was going on aiready— stables problem is its employ— if we reach also said that ment in the Hamburg area which F-28 jet airliner of which it

From the German aerospace burg is now negotiating to sell expected. Both sides of the mpanies Herr Gruener one half of this block of shares company have applied to their manded a trimming of their to the Bosch Group. Bosch will respective governments for velopment capacity, efforts to thus join Siemens and Boeing in financial assistance. At-a diffi-European project having small stakes in the com- cult moment in the company's anagement companies like pany, fortunes there are bound to be maying and Euromissile, and The other wholly German rumours of an impending orts to arrange transatiantic aerospace company, and perhaps national split in the company.

Nicholas Colchester

# Hawker Siddeley introduce their new soft-spoken long-range business jet.

When you see it, listen carefully. What you'll hear, and only just, is the HS125 Series 700 saving money and effort.

Flying 2660 statute miles with 6 passengers and a 45-minute fuel reserve - without any increase in

Flying not only within current FAA/ICAO noise requirements, but also the more stringent regulations proposed for the 1980's.

Flying with noise levels reduced inside as well as out. Which adds

work for the Series 700. It's built tough, to use unpaved strips.

And it incorporates numerous other advances, like the new Collins automatic flight control system, and new solid state AC power generation system. There are also improvements in appearance and aerodynamic efficiency.

If you would like to know more, we would like to tell you. Look us up.



# Favourable view in the Netherlands

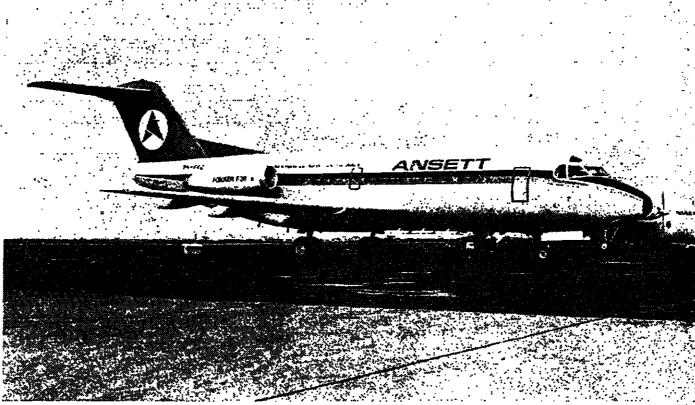
activity, particularly last year obtained was Fls.2.5m. when numerous Dutch factories of the recession and massive Pleas short-time working had to be It is understood that Fokker introduced.

this. But though it is still able loan to improve its capital to report "good" order books base. The company has also for its ever-popular F-2 Friend- made several pleas to the Govship turbo-prop commercial air-ernment for financial support craft, the position regarding the for the A 300B Airbus project-F-28 Fellowship is by no means in which its participation as a bright. Capacity expansion sub-contractor has not been plans have been adapted and the financially rewarding, but can Fokker company has "urgently be maintained as a subcontracrequested" the Government in for for the parts. The German The Hague for some form of arm of the group is a full parmarketing support in the credit (icipant, as the W. German

The company said it was release the necessary funds. facing "cut-throat" competition. This year the long-awaited from U.S. manufacturers, who signatures were put to the are much aided by a compara-various contracts involving intively cheap dollar, certainly dustrial compensation work and when compared to the guilder, co-production of the military Steep rises in costs in the fighter replacing the ageing Star-Netherlands are another nega-fighters, the General Dynamics tive factor. It appears, however, F-16. This follows the cothat the Netherlands Govern- production agreement signed commercial aircraft was focused planes. A decision is expected this would be worth around with General Dynamics, the

DESPITE THE rather difficult Finally, the Science Ministry situation in the world aviation has decided to set aside money market, there have been a for a possible new space project number of favourable develop- to succeed the successful ments for the Dutch aerospace "ANS" project, the launch of industry and its main proponent a satellite which only recently Fokker. This Dutch arm of the completed operations. Nothing German - Dutch VFW - Fokker is known about the Economics company has shared in most of Ministry's decision on aid for them. But the company still F-28 sales-the company emfaces uncertain sales prospects ploys some 8,000-but Fokker executives have good hopes. As The domestic aircraft indus regards the development study try, centred around Schipol, involving the new F-28 as airhas, however, shown significant craft for the 1980s, the grant

has also asked the Government Fokker has escaped most of for a Fis.25m. subordinated Government was prepared to



Fokker Fellowship in the colours of Ansett Airlines of Australia.

to look into the F-28 marketing Fokker said in its 1975 annual the VFW 614 has some good

advanced technology was some. Dynamics aircraft. The countries have been sold and there are thing that was there to stay in the Netherlands.

It had allocated money to Fokker for studies on a suc-fokker and the formula start to planes have been sold and there are allocated and there are allocated and there are allocated and there are allocated to the General atter a dimcult start to planes have been sold and there are allocated and there are allocated to the for 564 aircraft, with about 170 allocated was Fis.3.2m. The that the project would not depend to the formula start to planes and the for 564 aircraft, with about 170 allocated was Fis.3.2m. The that the project would not depend to the formula start to planes allocated was fis.3.2m.

A Fokker spokesman said drilling over the Netherlands not to have to assembly line. SABCA and the for 564 aircraft, with about 170 allocated was Fis.3.2m. The that the project would not depend to the formula start to planes allocated was Fis.3.2m. The that the project would not depend to the formula start to planes allocated was Fis.3.2m.

A Fokker spokesman said drilling over the Netherlands not to have to assembly line. SABCA and Hollandse Signal apparates. ever, Government assistance territorial fishing areas. Additional tasks include search and to subsidiary companies in West about 170 of the sets for the in all Fis.79m., almost double tion and the company allocated was Fis.3.2m.

A Fokker spokesman said drilling rigs and patrolling over the Netherlands not to have to assembly line. SABCA and Hollandse Signal apparates. ever, Government assistance territorial fishing areas. Additional tasks include search and to subsidiary companies in West about 170 of the sets for the in all Fis.79m., almost double tion and the company allocated was Fis.3.2m.

A Fokker spokesman said the project would not deplet the formula depend on the company allocated was Fis.3.2m. The that

And it was recently made known Constructions Aeronautiques U.S. market is almost impossible the company, which has already fellowship sales. Trade unions remainder will be delivered to build into the Constructions (SABCA) will also be benefit to penetrate following sur
received two orders from South in the Netherlands had in early General Dynamics to build into In its annual report, the crystallisation. decided to set up a study group ting from the F-16 work. VFW- charges on imports, it is thought America, has good sales hopes. stages opposed any such Fokker aircraft for the U.S. Air Force. NIVR, besides discussing the

ment does have an ear for the last year between the U.S. Gov- on the share in the production after the U.S. Presidential Fls.1.6bn. at January, 1975, work comprised the final for the possible development the production after the U.S. Presidential Fls.1.6bn. at January, 1975, work comprised the final for the possible development tion with the European elemant and the four formally decided not so long and countries the Netherlands Bal of the F-28 and the VFW 614, election. prices. The workforce involved assembly of 174 aircraft destined of a second Dutch infra-red more pronounced, does a finally decided not so long ago, countries—the Netherlands, Bel- Work on the latter aircraft is Fokker earlier brought out a would total 8,900. It has indi- for the air forces of the Nether- astronomical satellite (IRAS) reject the possibility of taking the possibility of takin industry as a whole, that which had opted for the General after a difficult start 16 planes Maritime II, which is specific recent changes in marketing Fokker will manufacture parts operation programme. The sum welcomed the French asserting the change of the control of the con

Fokker for studies on a suc programmes include Fokker and sible order from the U.S. Coastcessor to the F-28, which it is the Philips Company Hollandse guard services, which was in the
cearly hoped, will one day be. Signal. In Belgium the VFW- market for around 40 aircraft.
come a "European" aircraft. Fokker affiliate S.S. Belge de Although it is accepted that the
company which has already fellowship sales. Trade unions remainder will be delivered to Fokker has said of the work transfers.

report that SABCA's work on cards among the competing General Dynamics work that According to the contract that complete assembly of the such as the Fokker F-28 and

first aircraft should be ready making a plea for State and in mid-1979, while delivery of ance, also warned the Gove the first sets of components is ment on its policy regarding due for spring, 1978. Fokker grant of export licences for will also be involved in further Fokker aircraft. It rejected , orders from third countries, or two recent happenings we Interestingly, a number of the issue of such permits Dutch medium-size and smaller clouded by political considcompanies in the field of fine tions. It noted that the day mechanical techniques and the aircraft industry had sit technology joined forces not the 1950s consciously say long ago into a form of "aero- away from manufacturing a space" group.

The Netherlands Agency for to the development of civil a Aerospace Programmes (NIVR) Aerospace Programmes (NIVR) noted in its 1975 annual report that although the group had in the first instance been set up to participate in the General programmics co-production pro-Dynamics co-production probeen difficulties involving gramme, it wants to eventually South American and a Midi enhance its chances of being East country. accepted as suppliers in aircraft and aerospace projects. Positive "This could possibly be the first step towards an association follower is a tion of Dutch aircraft and aero-developments in the Europe space industries, for which we and American aircraft busing

repeatedly," the NIVR stated. Besides military orders, a Fokker said in its annual reje number of Dutch companies the discussions were intere have earned themselves a repu- ing, "not least with a view, tation in the space field. Follow- a possible improvement of ing the completion of the "ANS" project, the Dutch industry was entitled to call taken a rather more positive itself "space qualified," and with the aid of the Government Aerospatiale - McDonnell - Dou it is battling hard to maintain las Dassault decision in princip this status. The Cabinet to build the medium ram decided early in 1975 to release "Mercure" passenger airlin funds from its budget for "big than the U.K. has. technological development pro-

The company also said in July difficulties in marketing aircraft

tary aircraft, restricting its

Fokker is actively watchi been issuing pleas on efforts to reach certain

It likes the prospect of U. 7X7, are still a long way fre

> Michael van U Anisterdam Corresponde

# ERITISH AIRCRAF CORPORATION

# does much more than break sales records for aircraft and defence weapons.

It has also won export contracts to provide comprehensive ground support and training services which are already worth many hundreds of millions of pounds.

Today well over 2,000 BAC engineers are working abroad. They have been publicly: praised for their adaptability and skill, and their efforts have enhanced the reputation not only of BAC but of Great Britain.

Aircraft like Concorde, Jaguar and the Tornado multi-role combat aircraft, and weapons such as Rapier, Swingfire and Seawolf have already placed BAC at the forefront of advanced technology. They are the best of their kind.

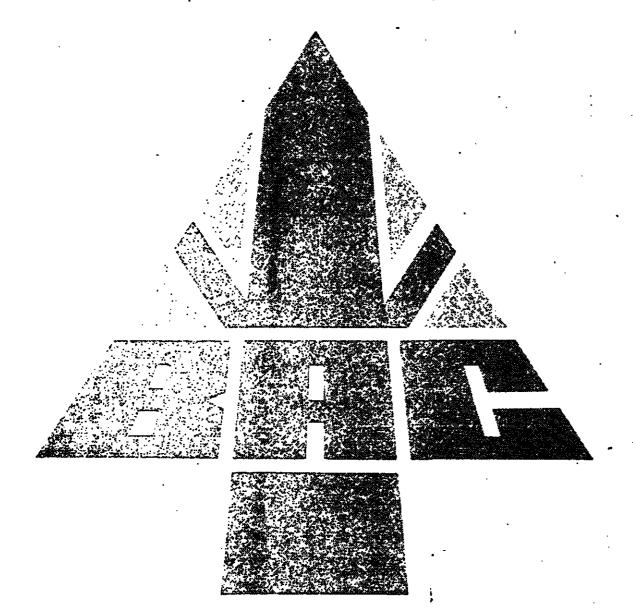
At the same time, BAC has established a powerful ability in Space, and its associated and sophisticated electronics. Its many successful satellite programmes have included a considerable contribution to the Intelsat communications series which today spans the Earth.

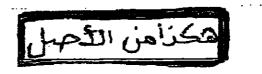
BAC's experience of the organisation and management of major collaborative projects is unrivalled, and its reputation for quality engineering and service is such that its products have been consistently sold to over half of all the countries of the world.

BAC can justly claim that the breadth and depth of its experience and expertise in every . major discipline of Aerospace are unique.

It is because of this strength that BAC is one of the Nation's greatest export winners of all time.

Jaguar with Dassault Breguet of France; und Tornado with MBB of Germany and Aeritalia of Italy.







# A successor for King Jack

ind , main points of private dis- levels.

the age of 65 in early 1978. Council. Attlee and his then legislation.

uence over the Labour Gov- weapon.

fierce hour Government and the pared elsewhere. in one of the prime archi-

IO IS to follow Mr. Jack Since then at every opportu- politician although after the dis- TUC leaders will fight hard to younger than Jack Jones and set as general secretary of many Mr. Jones has stressed the astrous London bus strike, not contain the protests and the is not expected to go for the Transport and General need for union members to industrially militant - on the recent close co-operation be top TGWU post, which would rkers Union? It is a position maintain a Labour Government Labour Party, TUC and later tween the TUC and the Labour almost certainly be his if he great importance for the and underlined his view that the Labour Government was Government is expected to wanted it, unless there were C and the Labour Party's under the Tories jobless totals formidable and demonstrated emerge intact. Indeed the TUC great pressure for him to do so.

isins, Jack Jones has not followers of American acree personal discussions that plennial Towo conference and imally taken on a Government. They played an important role the present social contract, the give the new general secretary of Labour and National for Sir Stafford's appeal for Vice and later Foreign Sec- wage restraint and used their Government, was shaped.

The union has in Mr. Harry ary, while Mr. Cousins was combined influence to further

ment has led to jibes that he However, the contribution of

side the conference hall at secretaries have consistently disarmament) to rely on carry- tion with the Labour Party. s week's annual TUC Con-relied upon, or else sought, the ing through policies without the support of the leader of the support of the TGWU and its Free negotiation dr. Jones, who has steadily TGWU, not only for the grow- general secretary. Mr. Cousins, ned in power in his seven ing "block vote" of his union however, did support Harold its as head of the country's at annual policy conferences Wilson's Government from 1964 gest union, especially since but also for his personal help until the 1966 July economic. the vic) Feather re- in persuading colleagues in measures when he resigned as on future pay policy, but to ee years ago, is due to retire ment and the TUC General Cabinet's first prices incomes

predecessors Frank for example upon the forceful two-way influence and support the present 44 per cent. £2,50isins, Arthur Deakin and bullying Deakin, allied with Sir between the TGWU and the £4 limit expires at the end of was seen as companying that william Leving Deakin, allied with Sir between the TGWU and the £4 limit expires at the end of was seen as companying that william Leving Deakin, allied with Sir between the Chapter of the Chapt test Bevin, by ensuring that William Lawther, the miners' Labour Party leadership became next July. By that time, howunion's influence in the president, Sir Lincoln Evans, far more sophisticated and ever Mr. Jones will be on the C and Labour Party affairs the steel workers' leader and effective through the creation verge of retirement.

I upon Labour Governments Sir Thomas (now Lord) of the Labour-TUC Liaison ComThe election to are with its huge member municipal workers. These men I about TUC Liaison Com- The election to head the ate with its huge member municipal workers. These men Labour was in Opposition and held later this year or early p-currently 1.86m. formed a powerful alliance then in Government. It was in next in order to have the issue decided before next summer's and against the Left and the this body and through innumer-

giance to the Labour Party spasmodic. The official forum year's Congress by the prior political been proven time and for the party, the Co-operative acceptance of a further period approach.

nad the impact of Mr. Cousins cuts could bring considerable National Freight Corporation most influential union post in the process.

- who was a ferrent left-wing criticism of the Government, But he is less than two years Britain.

Until he

Mr. Jones and other TUC leaders will urge delegates not

cutive of the Labour Party. Jack Jones has not followers of Ansurin Bevan able personal discussions that blennial TGWU conference and taken on a Government They played an important role the present social contract the signal and the this body and through innumer-decided before next summer's Kitson, the 55-year-old forms shake up. Hugh Scanlon, fiery trends indicate he may be, or take up one of the posts he

effy Britain's first Minister-policies of moderation and to
Technology—although his oppose the use of the strike Mr. Jones will be in the fore tary since 1969, the obvious front of those championing the man to succeed Jack Jones. He and

dership and will be one of would be far above present how difficult it is for any Labour general council will be urging. And sufficient pressure is not main points of private dis-levels.

leader (Hugh Gaitskell, in par-delegates to support a paper likely while things continue to among delegates. Since the war, Labour Prime ticular, found this in his bitter setting out priorities for a go well for Mr. Moss Evans, the 'rnalists and other observers Ministers and TUC general fight with Cousins over nuclear further three years of co-opera- union's national organiser, who is undoubtedly being groomed

the Jack Jones mould. ed as TUC general secretary other unions to back the Govern- a Minister because of the leave the General Council years ago when he was appeared to the new post of representatives free to negonational organiser. That aption, Moss Evans is expected to official, during which he tiate with Ministers on how policy for the Exchequer, However, after Jack Jones to achieve an orderly return to spread this illus. Sir Stafford Cripps, depended became general secretary, the free collective bargaining once predecessors. Frank for example more the forceful two-way influence and support the collective bargaining once arritment organisation and sor, but whether he would be due to achieve and support the union out of step with the was seen as somewhat of a personal control over the slight to Mr. Alec Kitson, union's lay executive which TGWU national executive officer, who as well as being third wing contingent, would remain a ballot for the assistant generated by the property of the union even more behind the Party than it is a member of the National Exe-

> TGWU in 1971, is also expected months after Jack Jones. to contest the election in which case he is likely to benefit from head of the country's second Left-wing support.

Mr. Alec Kitson



Mr. Harry Urwin



27

To date the eloquent Welsh- seat to a little-known moderate. Then the situation was very by Jones and Urwin to take over man has been best known for Mr. Terry Duffy, Mr. Bob different, with Hugh Scanlon the general secretaryship. He, his part on the Ford Motor Wright, one of the union's most setting the union on a leftward too, is politically very much in Company's national negotiating able and widely respected course by winning the ballot committee of which he is chair- officials, was seen as a strong to succeed Right-wing Lord Fifty-one-year-old Mr. Evans man of the union side, a posi- Left-wing contender for the Carron. emerged as a clear favourite tion he held on to after he was presidency. His term of office for the succession about three promoted to national organiser on the executive expires this Hugh Scanlon has not been the

eruitment, organisation and sor, but whether he would be dustry and was heavily involved other main unions

mercial Motormen's Union Union of Engineering Workers, which amalgamated with the is also due to retire—just six Nominations for this job as

largest union will be called That support, however, could early next year for a ballot in Lettward course continuation of the close rela- has worked in tandem with Mr. be divided if, as seems likely. October. Judging from recent thouship with the Labour Party, Jones in the Midlands area of John Miller, the Left-wing AUEW election results, this although be will be applied to the continuation of the close rela- has worked in tandem with Mr. be divided if, as seems likely. October. Judging from recent the labour Party, Jones in the Midlands area of John Miller, the Left-wing AUEW election results, this

Larry Smith, the union's 1971, Right-wingers have made position next year.

Until he lost his executive tested in 1967.

week ending a period of almost Assuming he wins the elec- 20 years as a full time AUEW same political force as Jack Jones although this has been

wing contingent, would remain a ballot for the assistant gento be seen.

The TGWU is not the only union due for a leadership union due for a leadership to be held next month. Should he be defeated, as recent ballot to be held next month. Should he be defeated, as recent ballot Boyd's presidential aspirations indicate he may be,

or take up one of the posts he appears to be that his own post has been offered outside the may be up for election at the union, then the Left would be same time as the presidential hard put to find a strong candiballot. Left-wingers will main-

s in fact "leading" the Deakin to the formulation of although he will be well aware the TGWU and, more recently, national secretary of the union. Should see a victory for the Communist Les Dixon represent "probationary" term does not the union. The Left on the union's seven apply to him because he moved that much of the interest has at Transport House, and be becoming and the left on the union. The Left on the union's seven apply to him because he moved that much of the interest has at Transport House, and be becoming and the sevential secretary ships and relieve the sevential secretary ships are sevential secretary ships and relieve the sevential secretary ships are sevential secretary ships and relieve the sevential secretary ships are sevential secretary ships and relieve the sevential secretary ships are se loyalty and policy was personal, at fact and already been removed from this lieves firmly in Mr. Jones also stands. A fourth, almost seventive the AUEW switched to man executive and Les Dixon up to the general secretary ship a Labour Party was personal, at how a labour party was personal at how a labour party was personal at how a labour party was personal at his party was personal at his party was personal at his party wa industrial certain contestant will be Mr. a postal balloting system in faces a ballot to maintain his from the executive.

other main unions.

tain that his first term of office expires after three years, in which case he would be "clecfor the presidency. But he will Only Mao-ist Reg Birch and argue that the initial three-year

Even if the Left win this in, but never more emphatic movement and the TUC—the favorance of a further period approach.

It is the party, the Cooperative more emphatic movement and the TUC—the favorance of a further period approach.

It is the party, the Cooperative more emphatic movement and the TUC—the favorance of a further period approach.

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It is the party, the Cooperative movement and the TUC—the favorance of a further period approach.

It is the party, the Cooperative move mixed approach.

It is the the Also plays a major role national bus secretary.

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It is the Also plays a major role nat which he unsuccessfully con-move into the assistant general

# Letters to the Editor

## Merger legislation

om Mr. Peter Franklin and Acith Harris.

Sir,-Without wishing to prejue in any way the deliberations the Office of Fair Trading rerding the proposed acquisition think it pertinent to make From the Managing Director, Manbre by Tate and Lyle, we or three observations about Management Services. : nature and state of current. rgers legislation.

Commission—a conclusion ch necessarily must throw doubt the validity or useful-

ness of existing anti-trust and mergers legislation. Peter Franklin. City of London Polytechnic. Keith Harris.
Department of Economics, University of Surrey.

### Pension fund management

Sir.—As the Government has begun its discussions with the first, it should be pointed out interested parties on the White Paper proposals for Trades Final. Union participation in Pension pension

many reasons, inter alia

smail groups). -Union Membership may be substantially less than all it the employees entitled to

per cent, nominee representation on the Board of Trustees or the controlling body.

should be disenfranchised. Finally, the control of any Ruskin College, Oxford. ly two criteria upon which a Scheme Management, it is hoped directly in the hands of the posed merger may be referred that all employers and others employers and the employers the Monopolies and Mergers concerned with this subject will members. There must be sufmission for full investign make their views known either ficient safeguards for the members of State hers to ensure independence of mmission for full investigate make their views known either ficient safeguards for the memory of the investigate make their views known either ficient safeguards for the memory of the investigate directly to the Minister of State bers to ensure independence of approach (including availability from Mr. Peter Brown of outside independent advice). Sir.—According to Mr. Pendry, forestall conglomerate bids tions representing the views of Adequate training for all MP for Staleybridge, Tameside in excess of £5m. are being example the N.A.P.F., the C.B.I. the duties and responsibilities failing to place for one week for, and (ii), an anti- and the T.U.C.

Schools

Schools

Schools

Schools

Schools

Sir.—According to Mr. Pendry, of outside independent advice). Sir.—According to Mr. Pendry, forestall conglomerate bids tions representing the views of Adequate training for all MP for Staleybridge, Tameside the duties and responsibilities failing to place for one week of their appointment, should be 46 children out of the 3,000 of their appointment, should be starting the new secondary

teriom particularly designed or through one of the organiss of controls independent software processing to when the views of from all clings represented the views of the control of the process of the p

 Multiplicity of sites and of death and devastation as Unions involved at each nuclear waste. I was not react (where companies are even ing to the fictionality of Mr. Dunster's rocket assisted nuclear waste disposal scheme, far from

Mr. Dunster, in your original scheme membership. article, accused the general
An outside body, having no public of a cavalier "perhaps financial liability or responsi- even entrepreneurial approach bility for the scheme, should towards the day-to-day risks of not have a position of virtual work—is there not a danger that equality in control.

(b) That effective participation about the risks of nuclear waste necessarily is a matter of 50 disposal and equally entrepreneurial in his defence of the Health and Safety at Work Act? Denis Gregory.

(c) That non union employees Research Officer. Trade Union Research Unit.

# Choice of

### GENERAL Dr. Henry Kissinger, U.S. Secretary of State, in London for talks with Mr. James Callaghan, Mr. To-day's Events

Anthony Crosland, U.K. COMPANY RESULTS Prime Minister, following week-end discussions in Zurich between Foreign Secretary, in London. Mr. Peter Shore, Secretary for Dr. Kissinger and Mr. John Vorster, South African Prime Or, Rissinger and Mr. John the Environment, begins three. General Holdings (1911) year). Worster, South African Prime the Environment, begins three General Holdings (1911) year). Minister, on the southern African day visit to Newcastle and Leeds. Revertex Chemicals (half-year). This afternoon he meets the COMPANY MEETINGS.

Aurora Holdings (full year). Cosalt (half-year). Leisure and dilly, W.1.
General Holdings (full year). Landscapes from the Royal
Revertex Chemicals (half-year). Collection, The Queen's Gallery,
Buckingham Palace.

Annual conference of the Council steering group in New page 8.

Brighton.

Annual conference of the Council steering group in New page 8.

CONFERENCE

All Hallows by-the-

action by National Union of August.

Shop attended by artists and Seamen.

Annual meeting of British craftsmen from U.K., Europe and Herr Oskar Fischer, East Association for the Advancement the U.S. Royal College of Art, German Foreign Secretary, meets of Science continues in Lancaster. Kensington Gore, S.W.7.

ART EXHIBITIONS

L. S. Lowry exhibition of nearly 300 paintings, drawings, pastels and water-colours, Royal Academy of Arts, Burlington House, Picca

secretaryship next month.

All Hallows by-the-Tower, Result of ballot on industrial try monthly trends inquiry for national conference and work. Alan Horsey, 1 p.m. St. awrence shop attended by artists and local loc Jewry, Gresham Street, piano recital by Alisa Clampin, I p.m. and St. Mary-le-Bow, Cheapside, recorded music, 1.05 p.m.



# It's our business to help you achieve them.

With \$13 billion in assets, Nippon Fudosan Bank is one of Japan's leading long-term credit banks. As such, we've provided financing and advice to practically every major industrial and commercial concern in the country. This experience makes us well qualified to help you achieve your growth objectives. In Japan.

And worldwide. Whether you're building a park or a petrochemical plant, seeking a joint venture partner or looking for financial assistance on world money markets, whatever your growth needs, you can rely on NFB's in-depth expertise to help you meet them.

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# COMPANY NEWS

# Marshalls (Halifax) sales expanding

satisfactorily for Marshalls (Hall-fax) with sales ahead of last year, says the chairman, Mr. D. R.

He stresses however that there must be some reservation regard-ing the concrete division because of the proposed reduction in local government expenditure.

But he is confident that the com-pany will make the best of those opportunities which are available and have every prospect of mak-ing a satisfactory profit for the year.
Although the present economic hackground does not encourage new investment the directors shall continue to look for and take those

opportunities for expansion. The company has excellent growth prospects he declares.

Close linancial control affected year.

a reduction of 10.4m. in horrowinus, while more than 10.8m. was year without bank borrowings
my ested in new plant. Also workand this trend continues.

mg capital increased by more than
U.Sm. in order to advance the Houchin declares that the current
housings and offset inflation.

Booksellers, stationers and edu-cational supply contractors Midland Educational reports a pre-tax

year ended 31st March 1976.

RESULTS IN BRIES

Total profits

Net operating profit

Dividends per share

■ Despite the continued existence of unsettled

conditions in the shipping markets and in the general economic climate, the consolidated net

operating profit for the group increased by 38 per

The vorid's principal economies have now proven to be quite resilient to the unexpected

increase in energy costs and in less than three vears, have regained most of their former per-

formance Requirements for oil as still the major

The tanker market is still affected by the surplus

improx ements recently, indicating that the industry's

"medicine" of lay-up, scrapping of older tonnage,

and cancellations of new building orders is having

the desired effect. While not trying to paint an

ocarly optimistic picture, one must nonetheless focus on the improvements in rate levels from the

bottom reached in December 1974. Of course, any

annificant increase in oil prices could again cause

disruptions to the world economies by rekindling

eviously mentioned, but in the spot market both the level of activity and the freight rates have shown

source of energy have correspondingly increased.

Insurance specialists are going to be rushed off their feet on Wednesday but thereafter the week's results list resumes its seasonal drabness. To-morrow takes in interim figures from Turner and Newall and Ocean Transport while on Wednesday there are half-timers from Guardian Royal Exchange, Sun Alliance and Phoenix Assurance. BSR also puts out an interim on Wednesday. Richard Costain arrives to-day and on Thursday there are six month figures from European Ferries.

cent. Earnings from both bauxite and alumina were \$US66.5m. (537.41m.) or \$12.3m. less than in

Kwikform

well placed

As known group pre-tax profit

for the past year increased from £1.09m, to £1.58m, on a turnover

# Houchin set to

Current trading, Mr. Houchin declares that the current order book is healthy and sales effort is maintaining it at an acceptable level.

The central trading, Mr. Houchin declares that the current order book is healthy and sales effort is maintaining it at an acceptable level.

The company has revalued its freehold land and buildings and this has resulted in a revised asset value in excess of II per share.

As reported, group pre-tax profits expanded from £357,363 to the company's performance in the 53 weeks to May 1, 1976, says the chairman, Mr. F. M. Russon.

And with the further development of the markets established and with the continuation of the adjusted profit would be £660,000.

Midland

Midland

Fducational

Booksellers, stationers and edu

# Jamaica loses

Company Limited

272,830

15,743

16,354

A MEMBER OF THE WORLD-WIDE SHIPPING GROUP OF COMPANIES

HK \$1000

2,578,240

148,769

154.541

Extracts from the Statement by Mr Y. K. Pao, C.B.E., Chairman, contained in the Annual Report for the

doldrums. The volume of U.K. Sales levelled out, but the company satisfactorily maintained its position in the U.K.

There was less of a levelling rocess in hire activity and it is intended to continue the policy of investment in this area, says Mr. Russon.
Industrial and Commercial

Finance Corporation and an associate owns 14.6 per cent. of the Ordinary.
Meeting, Solihull, October 4 at

# Hillards sees profit

(137.41m.) or \$12.3m. less than in the first half last year.
Behind the fall in production and sales was a 21 per cent. fall in the world demand for aluminium. Strikes at the island's three major alumina plants cost the industry 162 days' loss of production. Set to

advance

advance

advance

advance

The previous part of the previous year, and it is hoped to increase this still further this year.

Committed. It is proposed to increase the authorised capital to finores as the authorised capital to finores the company he form finoses in finores to finores the company he form finoses in finores to finores the company he form finoses in finores to finores the company he form finoses in finores to finore the finores to finores the finores to finores the finores to finores to finores the finores to finores to finores to finore the finores to finore the finores to finores finores the finores to finores the finores to f

profits in the 33 weeks ended May 1 1978 expanded by 66 per cent. to £1.07m. On a CPP basis the figure would be £1.24m.

As anticipated, the turnover exceeded £50m. and increased by 55 per cent. to almost £55m. To some extent the increase represents higher turnover at the stores which were being operated in

Since July, 1975, a freezer invested had increased and was centre and a small non-food store now £330,000, the increase being have been opened and plans are due to further trading receipts now being completed for two new and disposal of plant. There still

believe will result in a further position of the group was further improvement in the current year, improved by a loan of £840,000 he adds. for that amount the reversionary interests in the freeholds or long leaseholds of four supermarkets;

# Waitrose

Legal advice was being sought on the question of these contracts from the company's solicitors backed by an opinion of Queens WAITROSE, the John Lewis resulted in a turnover last week of almost £3m., an increase of 41.7 of almost £3m., an increase of 41.7 As far as the future of the per cent. on the corresponding crowther said the great three per cent. It was an out-

**RESULTS AND ACCOUNTS IN BRIEF** 

rejected as being neither in the interests of the company or its shareholders.

### MR. J. G. CROWTHER, chairman of Crowther & Nicholson said at status for 'Bats' exports

Mr. D. M. Pearson, chairman of BBA Group which is to-day due to announce interim results in respect of 1976.

Crowther &

**Nicholson** 

the AGM that since his statement of August 11 the amount of cash

possible to state what the final figure of realisation would be, as

would be further costs associated

with closure.

position

On October, the international exports division of British-American Tobacco Company will become a separate company called BAT (U.K. and Export) and will be a wholly owned substituty. remained to be disposed of certain buildings, property and sundry assets, he added. It was not The directors say this chang provides a more appropriate structure for the BAT group's the sale of properties was subject to market fluctuations and there U.K. tobacco exports as well as the

meaningful discussions were in prospect by the sales in the department stores and specialist shops, at more than £3.8m. were up 32 per cent.

Total sales, almost £7m. were up 39.5 per cent. on 1975, and for the four weeks to August 28 the four the four weeks to August 28 were ahead by 27.9 per cent.

Total sales, almost £7m. were up 39.5 per cent. on 1975, and for the four weeks to August 28 the four the four weeks to August 28 the follows:

Total sales, almost £7m. were up 39.5 per cent. on 1975, and for the four weeks to August 28 the four weeks to August 28 the follows:

The revenue is struck after interest and expenses of £892,000 convene an extra-ordinary meet. £750,006). Revenue available for ordinary holders amounted to member's voluntary liquidation. £120,000 compared with £113,000.

The dividend is again 0.4p net per 25p share. Net asset value per share is 81p (65p).

Corporate

Jamaica loses

for the past year to March 31,19%, of 215,020 against £296,2177

for last year.

The final dividend is 2.467129 neaking a total of 2.3429 (3.489p).

Turnover for the year us £3.34m (1514,09%).

Turnover for the year us £3.34m (1514,09%).

Earnings per share are given at 10.375m. to 10.23p).

Tamaica loses

for the past year increased from 110.75m. to 112.03m. on a turnover up from £10.75m. to 112.03m. and 11 (nil). The period of 10.75m. to 112.03m. and 11 (nil). The period of 10.75m. to 112.03m. and 11 (nil) and 18 (nil). The period of 10.75m. to 11.040 nones in the period of 10.75m. to 11.050 not exported to the companies of the past year increased from the past year increased from the past year increased from the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the interest charged on this loan is considerably less than the lenses of those proper trails which had been actively engaged in the realisation of the company assets and additional administrative work involved in the closure of the premises. Now that most of this work had been completed with the group's balances totalled film. Subsequently arrangements have been completed with the group by a further £1m.

Exports were 10 per cent. down the whole of the Board had been actively engaged in the realisation of the company assets and additional administrative work involved in the closure of the premises. Now the source of the properties and trails and the accounts when the leases of those properties.

In the interest charged on this loan to the company in the source of the properties and trails and the accounts which work had been completed with the group of the following the compan

# Atlantic

Assets

ALBERT FISHER GROUP (wholesale (54,745) before tax 51,001 (20,000). Consequently no final dividend will be for the year to May 31, 1576, already on a lame period last year. Totalisator known. Group (Exel axees £24,731 turnover 1.1.1 per cent. down on lame period last year. Totalisator known. Group (Exel axees £24,731 turnover 1.1.2 per cent. down on lame period last year. Totalisator in (Exel.681). Not current assets £38,64 (Exel.681). Meeting. Religing to deductible since Explember. 1973. totalisation industry—Results for year ended. March 31, 1976, already reported. Croup fixed axets £25,26 (EM,296). Net current asset £37,64 (EM,296). Net current asset £37,64 (EM,296). Net current asset £37,64 (EM,296). Net current safet £37,64 (EM,296). Net current safet £37,64 (EM,296). Net current fact from the year imminent.

\*\*ELAKEY'S (MALLEABLE CASTINGS)\*\* District the final conditions in the buildings industry. Meeting. Croup fixed axets 12,520 (EM,296). Net asset value per unit on July 31, 1976 (educting prior charges at pair was 2594) (248) January 31, 1976.

\*ESC.m. (ED,75m.). Net current perior in creases are plant in trading conditions.

\*ESC.m. (ED,75m.). Net current perior in trading conditions.

\*ESC.m. (ED,75m.). The c

# The Financial Times Monday September 6 1976 Continued growth for F. H. Tomkins

DESPITE VARIOUS problem

1976, Was 1991,000, against a rights
issue forecast of not less than Rewick Timpo
\$800,000, and compared with Rooker SteCounell
11,115,879 for the previous year, Bure and Masso
on a turnover of £8,22m. (£8,61m.).
Collins (William) Export sales from the U.K. Could william amounted to £591,799.

amounted to £591,789.

The chairman says that the profits can be considered satisfactory. Jones (A. A.) and Shipman This figure includes the post-Molins (A. A.) and Shipman Cardination profits of Hexagon Morris (Kniting Mills) North Securities and the first four months' trading of F.H.T. Stain-less which are not material in the total context. The fact that group turnover was up on last year was entirely due to inflation and reflects a severe reduction in Losle Gold Mines works.

The rights issue to the post-Miggs and Bull Mines (Bibliographics) and the first four periods and reflects a severe reduction in Losle Gold Mines (Bibliographics).

St. Hekag Gold Mines

The rights issue was very successful, some 91 per cent. of the offered shares being taken up. Part of the proceeds were utilised. Part of the proceeds were utilised in the purchase of Hexagon Fastenings and the formation and tribution outlets at suitable stocking of F.H.T. Stainless. Following this issue only just over follows the chairman. During a year of reduced remains unissued. In order to provide a more satisfactory margin it is proposed to increase the pany operated profitable it is proposed to increase the reaction of 10m. new Ordinary was taken of the devaluable was taken of the devaluable.

shares of 5p each.

In spite of the recession a decision was taken that the manufacturing units should maintain production wherever possible accepting that this would entail increased finished stocks. By doing this the group was able to avoid shorttime working.

was taken of the devaluant the pound to increase prices seas which helped to reduced margins at home.

FT Share avoid shorttime working.

avoid shorttime working.

The five-year programme of manufacturing investment has almost been completed and the group is currently reviewing the future in the light of the present Service:

Service:

British Debt Services (Services:

"We shall also create Banks-Hire Purchase).

DENPITE VARIOUS problems, Air.

G. G. Garman, chairman of F. II.

Tomkins, says he is optimistic.

World trade is improving, and even though the British economy may lag behind the rest of the world, he still believes that the next accounts will show continued growth.

There are signs of a gradual recovery in demand for all the company's products, but he stresses that there are many uncertainties over which the directors have no control.

As reported on July 23 group pre-tax for the year to May 2 pre-tax for the year to May 2 leaves the province of the pre-tax for the year to May 2 leaves the province of the pre-tax for the year to May 2 leaves the province of the pre-tax for the year to May 3 leaves the province of the pre-tax for the year to May 3 leaves the province of the pre-tax for the year to May 3 leaves the pre-tax for the year to May 3 leaves the province of the pre-tax for the year to May 3 leaves the province of the pre-tax for the year to May 3 leaves the province and general for the pre-tax for the year to May 3 leaves the province and general for the year to May 3 leaves the province and general for the year to May 3 leaves the province and general for the year to May 3 leaves the province and general for the year to May 3 leaves the province and general for the year to May 3 leaves the province and general for the province of the provinc

# Service

### FFI TERM DEPOSITS

Deposits of £1,000-£25,000 accepted for fixed terms of \$ years. Interest paid gross, half-yearly. Rates for deposited no later than 10.9.76.

Term (years) 3 4 5 6 7 \$ 9 Interest % 12½ 12¾ 13 13½ 13½ 13% 14 Rates for larger amounts on request. Deposits to and furth information from, The Chief Cashier, Finance for India Limited. 91 Waterloo Road, London SEI 8XP (01-928 R Ext. 244). Cheques payable to "Bank of England, a/c FF FFI is the holding company for ICFC and FCI.

# RICHARDS

OF SHEFFIELD

Cutlery, Hand Tools, Pocket Knives, Scissors, ... Stainless Steel Tableware, Garden Tools

### Financial Highlights

from statistical information contained in Annual Report

Year Ended 31 March	1976 £	1975 £
Turnover	2,372,156	2.728,7
Profit after taxation	197,999	284,1
Earnings per 10p share	2.1p	33
Dividend paid per 10p share	1.108p	1,017
Net Asset Value per 10p share	21.3p	182

Extracts from statement of Mr. W. Muller, Chairman:

### RICHARDS OF SHEFFIELD

★ Policy during recession has been to retain skilled labor force on full production ready to take advantage of the demand for their products when trade improves. Although there has been a reduction in profit margins the have increased their share of the market.

RODGERS WOSTENHOLM—acquired 31 December 1975

Modernisation, re-tooling and re-organisation is taking plat and when complete this company will make a valuable contribution to the profitability of the Group.

The board is confident that the measures taken during last year ISSUES have placed the company in a strong position to take full advantage of any improvement in general trading position. RICHARDS OF SHEFFIELD (HOLDINGS) LIMITED Registered Office: 55 Moore Street, Sheffield S3 7UT



(Incorporated in the Kingdom of Norway with limited liability)

U.S. \$60,000,000 9% Bonds due 1991 Issue Price 99<sup>1</sup> per cent

The following have agreed to procure subscribers for Bonds:

Swiss Bank Corporation (Luxembourg)

Hambros Bank

EQUITIES.

DINTEREST 5

Amsterdam-Rotterdam Bank N.V. Banque de Paris et des Pays-Bas

Credit Suisse White Weld Limited

Deutsche Bank AG

The 60,000 Bonds of \$1,000 each constituting the above issue have been admitted to the Official List of The Stock Exchange in London.

Particulars of the Bonds are available in the statistical services of Extel Statistical Services Limited. and copies may be obtained during usual business hours up to and including 20th September, 1976; a from the Brokers to the issue:—

Rowe & Pitanan, Hurst-Brown, City Gate House, 39 45 Finsbury Square, London EC2A 1JA and The Stock Exchange.

Strauss, Turnbuil & Co., 3 Moorgate Place. London ECZR 6HR and The Stock Exchange.

# Cement-Roadstone

### INTERIM STATEMENT

	28 weeks to 14 July 1976	28 weeks to 9 July 1975	Increase
Sales	£55.8m	£46.4m	+ 20%
Pre-tax Profit	£ 5.5m	£ 4.3m	+ 29%
Earnings per Share	3.94p	3.45p*	+ 14%

"We have confidence that the pre-tax profit for the year as a

Copies of the Interim Report may be obtained from the Secretary. P.O. Box 101, 19 Lower Pembroke Street, Dublin 2.

1975

the threat of inflation and consequently adversely

affect oil demand and transportation requirements. All in all, however, your Board takes a cautiously optimistic view also of the near term for tankers.

■ The drycargo freight market has made im-

provements since September last year and has reacted to the economic turnaround sooner than

has the tanker market, with considerable increase

in volume. This sector of shipping market is.

factors that may affect the tanker market, and in

building contracts that resulted from the conversions of earlier V.L.C.C. and U.L.C.C. orders may

have a dampening effect on the market again in

■ In the absence of totally unforeseen adverse

conditions developing, your Board is confident that the group's next financial year will prove to be at

least as layourable as that of the year under

employment with only two V.L.C.C. charter parties

vever, also susceptible to the same adverse

211,632

12,570

10.488

3,4p

2.255.995

134,001

111.803

36 cents

Increase

. 11.03

14.28

38.23

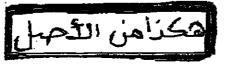
19.44

•	to 14 July 1976	to 9 July 1975	Increase-
Sales	£55.8m	£46.4m	+ 20%
Pre-tax Profit	£ 5.5m	£ 4.3m	+ 29%
Earnings per Share	3.94p	3.45p*	+ 14%
*Adjust	ed to take account of one i	for four Riahts Issue	

whole will show a reasonable increase overlast year's £8.6 m."

Cement Roadstone Holdings Limited













CLAVERHOUSE INVESTMENT TRUST

—Gross income six months ended June 20.

1978. 1245-236 (1252-945). Valuation of
investments 57.617.54 (16.414-239). Net
asset value per chare (uncluding net
current assets) 73.269 (86.729).

ELYS (WIMBLEDON)—Interim 0.6797
fsame), pay December 7. Turnover for
28 weeks ended July 31, 1976 (11.70-37).

76.1557-236). Less VAT 1517,767 (115.729).

Pro-tax loss 124.464 (loss 15.178) after
depreciation 22.133 (24.469) and interest
159.220 (155.64). Tax credit 12.290
(credit 19.451). Leaving deficit 11.714
(deficit 19.731).

HALLAM SLEIGH AND CHESTOM—
No interest (same). ETA SHRD CAIP
No interest (same). ETA SHRD CAIP
No interest (same). Profit 15.900
(511.989), No tax (same).

HARCOURT IRISH HOLDINGS—Turnover skill from morths—11.871,253). Profit 15.900
(521.151). Tax 17.570 (£11.380). Annelpated that profits for 1976. Hessitch
interfally higher than for 1977. Results
interfally higher than for 1977. Results
HARROTT AND CO. (controlled by

nneis Smale)—Pre-tax pmft for year ded March 31, 1978, 955,977 (251,129), x 132,994 (27,787). Earnings per share op (2,389). Final 11,76 per cent

HISTART STARTER ENGINEERING -Group met loss 1975 (12.626 (E19.916 routh: Fixed assots £0.156 (20.974). Not correct assots £23.043 (257.555). Chairman

areut assets 122,013 (237,255). Chairman assders prospects for the year to June 77 brighter than for some time. Outablies order book at June 1976 stood (187,006 and anticipated that turnover the year to June 1977 should subsmittable of the year to June 1977 should subsmitted the year to June 1977 should subsmitted the year to June 1978 should be year.

Lane Hotel. SW, September 27 at 11.30 am.

JOHN JAMES GROUP OF COMPANIES—Results year to March 31, 1978 reported August 6. Group fixed assets Em. (El.77m.). Investments valued 88,04m. (E.55m.). Current assets E.51m. (E.55m.). Meeting Bristol. September 29, 2000.

W. H. NORTON—Results for the year to March 31, 1976, already reported. Group fixed assets fixed as (Fix2.39). Net current assets fixed as (Fix2.39). Net current assets fixed as (Fix2.39). Net current assets fixed as (Fix2.39). Chairman ways that the company's prospects for accounts in relation to the company six prospects for the august of the company of

For the convenience of readers the dates when some of the ener important company dividend statements may be expected in he next few weeks are given in the following table. The dates he next few weeks are given in the following laber. The hown are those of last year's announcements, except where the morthcoming Board meetings (indicated thus') have been officially anythmized that the dividends to be published. It should be emphasised that the dividends to be leclared will not necessarily be at the amounts or rates per cent.

hown in the column headed "Announcement last year." Preliminary. profit figures usually accompany final dividend announcements.

•		
	Announce-	Announce
Date	Otent last	Date mem last
	. Year	year
APVSept.	25 IBL 184:	Hestar Sept 30 Int 9.6
Angio-American		"ibstock
OPS GroupScpt.	dividends	
Armstrong	an ancure	JohnsonSept. 23 Int. 12.3%
The Market of Co.		Johnson and
BattiptrientSept.	9 Final 16.7	Firth Brown Oct. 21 Final 14.2%
Rabcock and	•	Kiciowort
WilcoxSept.	15 Int. 3.9	
Bank of	و. ويو بنسه سه	Benson Sept. 25 Int. 8.3%
Continue Com	· · · · · · · · · · · · · · · · · · ·	Kuala Lampur Sept. 1 Int. 5.  Laing (John) Sept. 27 Int. 4.9: 5  Laind Group Sept. 22 Int. 7.34  Land Investors. Sept. 24 Int. 3.7:  Laporte Sept. 34 Int. 3.7:  Laporte Sept. 35 Int. 3.7:  Laporte Sept. 37 Int. 3.7:  Laporte S
Scotland "Sent,	le lat. 6.5°,	"Laing (John) Sept. 27 Tut. 4.9". 5
Barton and	· • · · · ·	Laird Group Sent 50 Int 734
Sons Sept.	la lor. a 1-:	. 1.30d Townstone Cont. G. Tiber 1 5 52
Arre Wiggins Sent	5 Int 4 94	Toron Michellar Per a Line 21 10
letry WigginsSept 3)CCSept Nactoril. Hodge Sept.	10 7m4 4.00 A	LEDUTESEPL 24 INL a.c.o
3101 Paris But	In THE WAS	PCM INCOSES: "101.NC 10 THE 671.1
Minus or mande orbit	7 Int. 5.3	"Lux Service Sept. 15 Int. 4.1%
BOOKET "		London Merchant
McConnell., Sept.	in Ti	Securities Sept. 11 Final 42:
lowring (C.T.)Oct.	B Int Lan	weethingsaspt. 11 Piliat 4.2%
		Loraine GoldSept. 3 Final 6 cen
3ridonSept.	16 lni, 11.7%	Morgan
British ·		Crucible Oct 3 Int. 16.4%
PrimingSept.	LP 3mt, 6.1%	*Orean
British		Property Control of the control
RollmakersOct.	- 1 4 -	TransportSept. 7 Int. 19.5 OzalidSept. 25 Int. 18.5
Technolist	1 - 721(* 2'6.9 -	OzanaSept. 25 Int, 13,3%
Broken Hill	•	TransportSept. 7 Int. 19.5 . OzalidSept. 25 Int. 13.3 Pearson (S.) Oct. 3 Int. 8.6
Proprietary, Oct. From Bros. Sept. ISR Sept.	3 Jm 714	Perison .
drown Bros Sept.	7 101 312	Longman Sept. To Im. S.6%
ISR Sept.	The Dra	Affrontia Company of April 100.3
TTP Come		*PortalsSept. 9 Int. 10.8%
Jumpi Davis One	3 Int. 20% \$ 5 Int. 14.2%	*Pradential
Junal PulpOct.	5 Int. 14,2%	Assurance Sept 18 lat 51.5%
300my		Ransomes Sims Sept. 25 Int. 3.5%
SchweppesOct.	2 Int. 4".	Ransonnes Sims Sept. 25 201, 3.5%. Ready Mixed
Japo	_ ,	CodereteOct. 1 - Int. 8.8%
IndustriesOct.	7 Int. 14.8	Danmien Gesich Come 4 1 En
	. TH' 14-9."	Reardon-Smith Sept. 4 lpt. 5%
Carpels		*Reyrolle
InternationalSept.	8 Im. 7%	Parsons Sept. 14 Int. due
Jarke	•	Rio Timo-Zinc. Sept. 17 unt. 16.2%
ChapmanSept. :	6 Tat 8 8"1	*Rolls-Royce Sept. 13 Int. 92".
John English		Rowutree
StoresSept. : ope AllmanOct.	77 Tre 15 40".	MackintestsScpt. 24 Int. 3.9%
one Allman One	2 Final 47.8°	MackintestSept. 24 Int. 3.9% "Royal DutchSept. 16 Int. 184%
Costain		Royal Dutch Sept. 16 Int. 18 %
		SchrodersSept. 18 Int. 4.6%
(Bichard)Sept.	. int 11.3% 5	Senior
		EngineeringOct. 7 Int. 7.1%, Shell TransplSept. 16 Int. 36.8%
International Sept. 1	S Int.11,3%	"She'll Transpt Sept. 16 lpt. 36.2"
laigetySept.	ls Final 5.8%	Sime DarbySept. 29 Final 134%
)anish Bacon Sept.	s int 5.4%	Simon
)anish BaconSept. Jelia MeialSept.	5. Int 11.2%	Engineering Sept. 8 Int. 13.5%
Dickinson		Smaril S. or 28 7 100
Robinson_Sept.	1 1-4 14-00	(Jefferson) Sept. 29 Int. 16%
MI Oct.	final 11°	Steetley Sept. 8 Int. 12.3.4
WEN OUT THE "Sebt"	7 III. 15.4%	StortleySept. 8 Int. 12.3.4 Stone-PlantSept. 18 Int. 9.9%
agle Star Ins. Sept. 1	8 . IOL 9,5%	SIGTEV BYOS Cler. 19 Jul. 5.1%
ratobeak .		Sun Alliance Sept. 8 Int. 12.34
Ferries. Sept.	9 Int. 3.7%	TarmacSept. 27 Int. 9.5%
Szazuded ·		Thomson
MetalSept. 1	0 Tet 7.7%	Organisation Oct. 2 Int. 9.5°.
TIERRE EAST	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Organisation., Oct. 10t. 9.3
'09eco MinsepSept. 3	7 Int. 6.7%	Tilling (Thos.) Sept. 17 Int. 12.7%
OKTO MIMSEPSept. 3	4 Int. 9.5%	*Turner and
reemans		Newall Sept. 7 - lat. 4.6%
(London)Sept. 3	5 Int. 12.37.	
Trattan '		Grotto Sont decidends
Warehouses Oct.	7 lest 10 104	linited Ricords Sant 15 Jan 0 70.
Suardian Royal	10.1	University Control of the Color
ExchangeSept.	D 7mm 81 FAF	VALUE OF THE CO. 17 (18. 0°)
English Control	S Int. 21.5% .	Group Stopt. dividends United Biseuits Sept. 15 fnr. 8.7% Vickors Sept. 18 Int. 8°, Waddin Sept. 16 Int. 58', * Board meetipps incompand the
west Reed Sept. 1	9 Int. 6.2	*Board meetings intimated, † Rig
larmony Gold Sept.	9 Int '35 cents	Bistante Burnation . 100
lepworth .		issue since made. Tax free. I So
CeramicSept.	9 Int. 52%	issue since made from reserves.
		as your sound PCOs

### **World Economic Indicators**

					Change	
		1		. • .	on year earlier	Index -base
	july 76	June 76	May '76	July 75	%	year
.S.A.	171:1	170.7	169.2	162.3	5.4	1967= 100
.K.	156.3	_ 156.0	155.2	138.5	12.9	: 1974= 100
iolland .	169.7	170.4	170.4	156.7	8.3	1969=100
V. Germany	138.9	140.0	139.4	134.7	3.1	
aly	199.6	198.6	197.3	171.4	16.5	1970=100
rance	167.2	T65.6	164.9	152.8	9.4	1970=100
	lune '76	May 76	April 76			-
ipan	188.1	187.6	187.2	172.4	9.1	1970= 100
elgium	155.6	155.4	154.3	142.3	9.3	1977 = 100
<u> </u>		. l			1	

### RECENT ISSUES

	_						
<b>.</b>	(18 C8	Amenant Pald Up	Latest Begune. Date	High Low	Stock	Edgard 4	Times Times Circle Vines Yield
	12.		17/9 15/9 20/8 23/9	£2714 £2154 70 €5 £2738 £2634 £315 £2618 £35 178 £2 57 111 101 \$2,60 62	Aparica Med Int. Inc. Berry Pacific Fd. U Borthwick (Thos.) Dentsply Int. Inc. Eanarit \$1 S1. Hambro Life Awar Leech (War.) Buils Molius. Benown Inc. Y20. Tuinx S. A. I I	SSI E27 601 59 (81) £3634 £2644 192 5 ders 57 101 -1 32.60;4.20	Q24c
	_		F	XED I	NTEREST	STOCK	<b>S</b> .
	D. 17 T	Ainound Patel up	Latest Bearing. Date	1978 High Low		Stock ,	Closing Frice
S	10 10 100	F.P. F.P. 61 —	17/12 3/9 1/10 12/11	10 97 92 83 971 97 \$103 \$100	Agricultural Mort G.T. Asis Esterlin Islington 1343 Her Mid Kent Water 8 New Brunswick (I Portamouth Water Royal Tas. Mort. 8 Sankatchewan (Pr	g Fil.Pri. Red. Slock 1982 Theo. Pri. 1981 Trivince of Sec. 198 Red. Pri. St. 198 Red. 1982	975 975 \$191
				"RIC	HTS" O	FERS	

e	tent 2010c. atms	High i			Closing Price P***	<u> </u>
9	6/10		LIA	ARLEA Sect.	11gpm   185เจก	
ı	! !	180	185	Bank N.S. Wales.	100141	-
В	10/9	67	60 .	braby Lealle		í
3.	8/10	2.1	12	Charterial Pinance	l 4pm	
В	17/9	184	1514	Karer (George)	16	····
Ř	24/9	162	134	Hogg Robinson	155	]
Ď	10/9	3412	En la	KWIZ FII (Tyres + bt.)	i .onling	<b></b> .
		17.5	7	Lorell (Y, J.)	73epto	ļ "
•	8/10	1214	- day	Land Con 1 to 1 Marian Control of the Control of th	oik	1_9

Resunctation date assembly last day for dealing free or stamp daty. a Placina 1 to public. b Figures based on prospecting estimate. d'Dividend rate naid or bide on part capital, cover based on dividend on full capital. per pence so otherwise indicated. a Powerant dividend: cover based on previousity real's night. A Figures assemble a Powerant dividend: cover passed on previousity real's night. Figures assemble a Cover allows for convenion of shares not now ranking dividends or ranking only for restricted dividends. — Issued by tender, say of capitalisation. It tender allowant price. — Reintroduced. A Figures of Continuous and a proposition of the section with reorganization, wherear or targeton. — Indicated to the Provisional or preference holders. I Allowant lotters for fully-paid. — Provisional or lip-paid alloiment letters. S With warrable. — After suspension.

# Bally reaches agreement

taking C. F. Bally AG, the parent had said that men of straw were concern, have been fully met. company of the Bally shoe group, being used on a large scale to has reached an agreement with buy shares. Dissident shares Syndikats AG, also of Zurich, on holders who unsuccessfully called While the dissident shares. Syndicates AG, also of Zurich, on holders who unsuccessfully called While the dissident share-the registration of a substantial at meeting for a change of holders were also urging a change

THE ZURICH - based under Bally President Walter Heiniger of the "Swiss character" of the

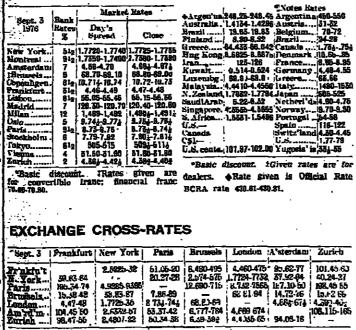
ZURICH, Sept. 5.

# **Confidence at Schering**

SCHERING, the Berlin-based Within this total home turn-pharmaceuticals and chemicals over was up 14 per cent to aroup, expects an improvement DM261m. and overseas business in profits this year, after a strong up 11.5 per cent. to DM428m upturn in activity during the first while brisk demand for insecti

# Hollandsche Beton on the rise

Error s. s. married and section of the section of t	duction.	orld recession during th	HBG added in its interim state-	Melbourne regard them as, to use Capel's conclusion is that the Potential iron ore miner which	
RETAIL PRICE INDICES	Profits before taxes and alloca- o	perating year had created diff	- ment that the order book rose	an Australian expression, a good snares must rank as an attractive with the wind half way	
Change	tions were some Kr.500m. com- c	ulties for some sectors of th	strongly in the first half of this	The Die of this year lines that Australian anguing between Port Hedland and Cage	
on year index	i Dared With Kr. 229m. a year c	oncern, but saio inese dao bee	11 <b>vear.</b> Mainely irom F18.2.000. 20	multiples will remain above those Lambert. It will be at the end	
earlier base	earlier. The 1975-76 figure in- cludes, however, some of the n		3.5bm at mid-1976.	ohtsinehle in other markets Fri. 01 3 New 163-Mill full If 30K Willin	
july 76 June 76 May 76 July 75 % year .S.A. 171.1 170.1 169.2 162.3 5.4 1967=16		ew areas of activity.	3,30 ft at mid-1910.	day's London price was 450p. In will be "down hill " most of the	
.K. 156.3 156.0 155.2 138.5 12.9 1974=10				The Agnew nickel partners in Sydney they were \$4.57. Laing way. Not that this is likely to Western Australia, Selection Trust regard UMA as "excellent value influence Sir Charles in his think-	
.K. 156.3 156.0 155.2 138.5 12.9 1974=10 iolland 169.7 170.4 170.4 156.7 8.3 1969=10				Land MTM Maldings will no doubt at any price below \$6" INC. SO UNIESS TOXASCULL CAN PULL	
V. Germany 138.9 140.0 139.4 134.7 3.1 1970=10	i Vianav 9	INA KYM		the hearing that the Erleenbridge If I may add a word of caution something unexpected out of the	
aly 199.6 198.6 197.3 171.4 16.5 1970=10	a IVIUIIU Y <i>U</i>	IIIU LAVI		laten is the first one on an unward to those eulopies it should not Japanese hal like control book	
rance 167.2 165.6 164.9 152.8 9.4 1970⇒10	<i>i</i> o	•	• • •	Instruction will lead to a S3 a be forcetten that the company Still SCEM to DC ON GOISWORM)	
- June 76 May 76 April 76 June 75	Bank of England Minimum by	r official nurchases of Treasur	r trade weighted depreciation par-	pound price by the time this pro- have to provide some \$50m. Area C with Deepdale as the	
ıparı 188.1 187.6 187.2 172.4 9.1 1970=10	b)	lls.	rowed by 0.1 per cent, to 39.6 per	ject comes on stream in 1978. And (£35m.) towards the capital costs other from runner.	
elgium 155.6 155.4 154.3 142.3 9.3 1971 = 10	M Tenting vare 117 her cent	At the weekly Treasury bil	l cent.		
	(since May 21, 1976) to	nder the average rate of dis	- The dollar was weaker against	tļ	
Creation of new offshore	Markets were generally quiet Co	ount fell by 0.0110 per cent. to	o most other major currencies, with f its trade-weighted depreciation	INSLIDANCE	
L Manager Creation of new offshore	and colm last week, with a good "	1,9393 per cent and bank o	t its trade-weighted depreciation widening to 2.46 per cent. from	INSURANCE	
	supply of day to day credit assist		2.24 per cent. at the end of the		
And the state of t	ing the Landon money market	Local authority loan rate	s previous week.	C	
A R authority expected	write sterring and most other cur-	nded to ease for short-term	There was no pressure on the	Covering the cost of shopping	
A Maumority tapected	the foreign andburgs market of	nosits, while mortgage secto	r currencies in the European cur-	overing me cost of snobbing	
	Cold word - loo, make stable and 19	tes rose in line with othe	r rency snake and members of the		
BY RAY DAFTER, ENERGY CORRESPONDENT	quiet than in previous weeks, to	nger term money market sec	<ul> <li>joint float traded comfortably within the agreed snake limits</li> </ul>	BY OUR INSURANCE CORRESPONDENT	
NNOUNCEMENT of a new cering; the Scottish Offshor	with the main interest in the bo		The French franc gained ground	BI OUR INSURANCE CORRESPONDENT	
ertifying authority for offshore Partnership (SCOPA) compri	bullion market centring around w	.ah at	t an managed annichmen after the		
il platforms is expected soon ing Babtie Shaw and Morton					
the Department of Energy Merz, and McLellan V-ARI	J. III.S decision to caucal stocknile pr	r cent. higher than the previou	. Minister while the Swiss franc	·lectainly following the much infough the fault of his em- has been found liable a move	
a statistion while settle a clouch and note and same	S sales.	eek's batch.	declined on Friday on rumours	publicised litigation against ployers. By English law, unless can be made against his insurers,	
iam and Partners: W.	S. Interest vetes in Landon shawed	Sterling gained 70 points agains	t that Switzerland is to make a	McDonnell Douglas in the U.S. some close relatives can prove if they trade in the U.S. (as do arising from the Turkish Air-financial dependency, the com-many British companies), or	
	r little change overall with easy of	e U.S. gouar on Tuesgay, II see at 91 7770-1 7790 largely of	on the release of funds by the	larising from the Turkish Air- mancial dependency, the com- many British companies), or lines crash in France, I have pensation his estate can collect have ascertainable assets there.	
ensulting Engineers for a new del Palmer and Tritton.	credit conditions keeping down	d of the month commercial de	Swiss National Bank. The Japan-	lings crash in France, I have pensation in selected and content have a secretarizing assets their.	
According to the latest issue	e short-term rates while the longer m	and. Over the rest of the weel	'ese yen rose sharply at the end	lines crash in France, I have pensation his estate can collect have ascertainable assets there. commented that insurers view will probably be less than £1,000. This new and at present only with increasing anxiety the In Scotland, where close relagrowing practice among internatives can claim for injured feeling, and particularly American, litigation lawyers of forum or so. But if the deceased relagroup in litigation in the	
te existing five agencies; Lloyds, of New Civil Engineer, th	el periods traded nervously on fears it	tended to drift down, although	of last week, on speculation that	growing practice again interest tives can claim for injured feel-	
et Norske Veritas, the Ameri magazine of the Institute of	f of an upward trend in rates later pr	iblication of figures showing	the Japanese authorities may	tional and particularly Ameri incs. the figure might be £2,000 great uncertainty. In the short	
in Bureau of Shipping. Ger-Civil Engineers, Haicrow-Lwain	sh	arp fall in U.K. official reserve	allow a further appreciation of	can, litigation lawyers of forum or so. But if the deceased relation matters must spent a dear	
anischer Lloyd, and Bureau is the most likely candidate in the appointed.	uses in the money market on a	oct This news may been been	'.'-!	TENDROUND This is the device of lives the cities sullewhele in the American accuration at the cities	
It has been emphasised that	(Manadan and Thomasian and ha	lamand bu tha fact that an decre	. tian malinu	Intaking a ciaim and in the contract may have some more of the marines of things American	
Tanta Con 1990	I shoughod coupling founds on Wod. in	ee warn mada an tha etandh	. Cold rose \$97 to \$1087.1071 as	Irolinity where the accident coldining 3/3,000 of indic. So our dans into the next decade	
netion structures, particularly Plan to cut	needed by calling a small number or	edit fucility for the secons	I the market awaits the outcome of	Thannens nor northans against the Intre 18 big Money in Torum 16 the many against the Intre	
e concrete gravity platfums;					
e totally unlike ships, with hijs tares	shortage on Friday was relieved of	triday at \$1.7725-1.7735, a rist	s tombor 12 s tombor 12	State much more remotely con- claimant. Any American litiga- that local jurisdiction clauses are cerned, but nevertheless in some tion lawyers working on a con- of no avail in the U.S. then not	
high the five outhorities have was the wo		20 points on the week, and it	EHIOCI ID.	leave and a side and a side and a side and the horse thirst stand to	
en traditionally associated. SHORT distance fares on buse	S Storling Local	Local Auth. Pluance	Discount	hanget considerably only will some very costly awards	_
A short-list of four applicant run by East Midland Moto thorities was presented to the Services may be cut in a bi	IT   Cart 3   Cart Greton   Interhant   1 mthre		guartet Treasury Bank Fine Trade deposits bills o Bills o Bills o	Where compensation is more Where a motor or liability flave to be paid, far in excess of	
thorities was presented to the Services may be cut in a or spartment of Energy in Novem- to attract passengers.	<del>  </del>			easily obtainable and in greater policy has a local jurisdiction the funds confected from current	
r last year by an independent. The company, which operat	e Overnight 10-11	— — 103 <sub>4</sub> -11	1038-1058	amount. clause insurers intend to pay premiums, out other claimants	
laction committee It is he ID NOTTH NOTE, 310 NOT	I II days or	1 (	-   -   -   -	Because of limitation clauses the courts within the territorial dictions may start to take the	
wed that a Department recem- Derbyshire, has applied to the	e   Carys notice   -   1012-1034   1058-1	054 - 11 -	1010-1058 105a-1074-1034-1074-1134-1110	in the contracts of carriage with limits of the policy and so by same legal line.	
endation has been with Mr. traffic commissioners to b	e One month 10:1058 10:10:10: 105	111 <sub>2</sub> -105 <sub>4</sub> 11-111 <sub>8</sub> — 111 <sub>2</sub> -11   111 <sub>2</sub> -115 <sub>8</sub> —	1058 1054-1078 1054-1078 1154-1115 1058-1054 1078 1078-1078 1154-1158	the Turkish Airlines, the depen- the rules of liability and over. Now the problem, or at least	
endation has been with Mr. traffic commissioners to he of the name	Three months 11, 112 116-1138 1118-1	1,6 1112-11 1112-1158 -	105g-1054 1076 1027-1078 1154-1158 105g-1078 10 114-11 1134-1158	the Turkish Airlines, the depenter the rules of liability and quanter Now the problem, or at least dents of the victims of the crash tum which they have taken into some part of it, has been calculated at best have got compensationally account when fiving the promium posed insurers can begin to take	
tergy Secretary, since mid-1p on about half to its 5p fare	S   SNx months   117g-110g   114g-1146   116g-1	112   1112-11   12-1218   — .   12-1112   1214   — .	_   _   111@-117%   113g-115g	would at best have got compen- account when fixing the premium posed insurers can begin to take	
arch, and a similar ip cut on a sma	One year 12/2-11/2 11/2-18/2 121	1214.1114 1214 -	_ [ ] =   =	loging up to an internationally for the sieb. The local invision action by faling increases in ac-	
The four short-listed organisa- number of 7p fares, if approved in the reduction could come into	- Two years 1234-1	278 1		labeled level. The legal device tion clause is an integral part complate the extra linus which	
troleum and Offshore Engin- effect in mid-October.	Local authorities and fluance houses sev	en days' porice, others seven days' f	and Long-term local authority mortgage	of suing the manufacturer of of rating structure.  the aircraft in the U.S. has meant that perhaps ten times in several claims made in the But for those claims already in that arrows the manufacturer of courses are under attack sary to meet more costly claims.	
Constitut with outstate bufful effect in untaccioner.	rate nominally three years 13t per cent.;	four years 13; per cent.; five year	s 133 per cent. OBank bill rates in table	meant that perhaps ten times in clauses are under attack sary to meet more costly clauses.	
	per cent. Approximate selling rate for o	e-mouth Treasury bills 184 per cent.;	two-month 1013[6-10] per cent.; and three-	that amount of compensation U.S. arising out of accidents in the pipeline, those already in-	
· · · · · · · · · · · · · · · · · · ·	month 10 59-64ths-1629 to per cent. Approxim	ate selling rate for one-month bank	bills 10; per cent.; two-month 101516-102532	can be obtained, albeit from a Furone and Africa. The attack curred and not reported and in	
RECENT ISSUES	three-months 11;-11; per cent.	cent-) dus-minum (1806 ohre 118-115 )	er comes consumments trained but comes applicable	that amount of compensation U.S. arising out of accidents in the pipeline, those already n- can be obtained, albeit from a Europe and Africa. The attack curred and not reported and in different source. Comes in two stages. The first respect of those policies still to	
KECENI 133VE3	Finance Hause Base Rates (published by Black Deposit Rutes for small sums of sever	the Figure Houses Association 11)	per cent. from August 1, 1976. Clearing	1. The Turkish Airlines case is is a claim launched against an be renewed where claims may	
	bill average tender rate of discount 19.9293 t	er cent.	dire trace for identified in that call lightness	la sign of the compensation, alleged wrongdoer who has a still arise, there is nound to be	
EQUITIES			001.0 244545	conscious times and emphasises place of business and some assets a substantial financial shortfall.	
	FOREIGN EXCHANGES	OTHER MARKETS	GOLD MARKET	the need both for primary	



# U.S. S in Montreal U.S. S = 97.54-86 Canadian cepta. Canadian S in New York, C S = 102.17-19 U.S. cepts. U.S. S in Milan 840.9-541.25. Sterling in Milan 1490.3-1491.6.

		CY INT	•		
c. 3 1976	Sterling	U.S. Dollar	Canadiaz Dollar	Dutch Guilder	W.German

one-month 10-10% per cent.; three cent.; one year 11-11% per cent. The following nominal rates were quoted for London dellar certificates on departure one-month 51-51 per cent.; three-month 51-51 per cent.; six-month 51516-51516 per cent.; one year 51-51 per cent.

"Rates are nominal closing rates. Short-term rates are call for sterling, U.S. doltars and Canadian dollars, two SDR as calculated by the international Monetary Fund in Washington.

### **GOLD MARKET**

56		. hept. 3	Sept. 2
יובו		<del></del> -	
2	Gold Bullion.	İ	
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754	L'Iose	S10631071o	510534-106
85	Opening	SIC54-105	S1053-10
8.85	Morning fix'g	\$105.55	£107.36
4.55		£59.535	1260.5331
,	Afterno'nis'g		S1J6.10
-1580		£60.555	£59.808
25	.Gold Colus		
4.75	domestically	l. <sup>'</sup>	]
9.30		S1094-1115	101/301-11
3	VLIE CHAIN	262,53	161 . 62
22	NewSov'r gua	1904(03) 830 41	S3814 4014
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ior	(interpresit)		)
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	Old Sur'r'gus		55414-3614
	Concor, Sa.	(£191 <sub>2-2</sub> 01 <sub>3)</sub>	£161e-201
	\$20 Kagles	2181 (O4	£1801g-183
	Sli Eagles	MDE 09	£94-97
	Am Dagita	1000-35 1144 6 m	
rb	So Eagles,	20407	<sup>1</sup> 8631 <sub>2</sub> .661 <sub>2</sub>
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60	FORWARD	RATES	-
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Paris		714-614 c. p
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	h forward U.S.	
Proc 200 1	-month 12.55-13	.45c p.n.

SPECIAL DRAWING RIGHTS RATES

Switz trane

MINING NOTEBOOK

# Falconbridge flies a nickel price 'kite'

BY LODESTAR

the registration of a substantial at the meeting for a change of minority shareholding in Bally statutes, limiting to foreigners in the name of Syndikats AG.

Negotiations had started following the C. F. Bally annual refused, are allied to Syndikats and refused to enter a number of recent share changes in its tions laid down by its Board for registered-shares list as it guarantees in the case of the formed by the dissidents in June claimed it was not clear who was not clear who was not clear who was controversial registrations, particlaimed it was not clear who was controversial registrations, particlaimed at the meeting for a change of holders were also urging a change in Board membership and alterations in group policy, Bally says that the continuity of the management policy introduced by Bally in the past two years is guaranteed."

A shareholders' committee in one sense no surprise. It came is not out of the Norwich Park device in Board membership and alterations in group policy, Bally says that the "continuity of the management policy introduced by Bally in the past two years is guaranteed."

A shareholders' committee in one sense no surprise. It came in one sense no surprise. It came in one sense no surprise. It came is not out of the north Kalguril plant.

London they were 35p. Iron ore battle one of June, cularly concerning the retention 108,000 shares.

UPI LINC BY MORE TO DASSEMBLY MORE SET MORE AND A SET MATERIAN Seri. 5.

Turnover in the Junuary-Lune photographic control of the single most percent described the single most percent described the single most percent described to the single most percent described to the single most control of the first time of the results. That one obsequently went on the control of the single most control of the first time of the results. The single position of the first time of the results in turnover display. Non-Am Inc. Turnover of Schering A.G. the Darrow of Schering and the results of the single position of Schering and the single most of Schering and

ated by Inco, the world nickel coal share. Utah Mining Australia although this is not quite fair although this is not quite fair for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some of them have been riding on this particular band-wagened about the alleged for some some of them have been riding on this particular band-wagened favouritism being should for some of them have been riding on this particular band

THE OPINION was expressed here for Selection Trust if the present of the Norwich Park development on July 26 that a pickel price rise sticks it will at least be help-part of which will almost cerrise before the end of the year ful for its struggling Spargoville tainly have to be met from fresh

Once again I have to return to last producer quotation advance tainly catching up with this from \$2.01 to \$2.20 a pound initiculumn's favourite down-under atted by Inco, the world nickel coal share. Utah Mining Australia producers and potential new-tender.

Leader.

London's stockbrokers are cerour contracts being conducted by western Australia's Pilbara area producers and potential new-tender.

conscious times and emphasises place of business and some assets a substantial financial shortfall. insurers and for their re-insurers to get adequate premium for the to get adequate premium for the provision of products liability cover for manufacturers. But the problem is not only a products liability problem.

To try to combat legal forum shopping, in liability and some motor policies, insurers insert what are called local jurisdiction clauses.

The Press Council yesterday rejected a complaint by 28 MPr.

sue the hire operator in his own said it was totally untrue. country if the operator has a The Press Council's adjudical mately in the Commons, but in place of business there. He will so sue if the liability laws of having considered the articles that country are more onerous published in the Daily Express than ours, so the damages pay in the light of the notice of able for the injury are sceater, motion but down in the Commons. able for the injury are greater, motion put down in the Comquite apart from any exchange mons, finds that the first article rate consideration.

was clearly speculative and It is clearly in the interests that subsequent articles was clearly speculative and it is clearly in the interests that subsequent articles profinsurers to have cases deterined factual and clarifying mined both on the question of information.

Itability and valued so far as quantum is concerned according.

liability, and valued so far as "The complaint against the quantum is concerned according Daily Express is rejected." to British law, and to avoid in-curring more expensive liabilities abroad. It must also be in the car hire operator's interest. If his insurers in this country have to meet more expensive claims he will have to pay higher premiums for cover in this couniry against the chance of litigation abroad, as surely as night follows day. Hence the use of local jurisdiction clauses, which exclude insurers liability for claims made in courts overseas.

# Daily Express

tion clauses.

Perhaps a simple example in rejected a complaint by 28 MPs

should sue here, but probably the Government would be taking he will get back home before steps to ban the sponsorship of he thinks about compensation, sport and other events by At that stage he can, of course, cigarette companies. The MPs

# **Scots Nats** reject 'more

Lords' call

SCOTTISH Nationalists have turned down a move to seek stronger representation for their party in the Lords. Mrs. Winifred Ewing, MP for Moray and Nairn, told delegates at the Perhaps a simple example in the motor insurance sphere will against the Daily Express. The show the purpose of such a complaint by Mr. Guy Barnett clause. Suppose a car hire operator trades in the U.S. and Europe and hires cars in this country both to Britons and to foreign visitors. He inadvertently hires a defective car and a customer is injured in its use. Prima facie the customer front page story claiming that should sue, here, but probably the Government would be taking.

by 170 votes to 22 after narty chairman, Mr. William Wolfe, told the meeting: "The future of Scotland will not be tested in the Lords anyway, nor ulti-

### INSURANCE BASE RATES

Atlantic Assurance ... 12 % Cannon Assurance ..... 9100 Address shown under Insurance and Property Bond table.

### **Public Works Loan Board rates**

Effective from August 28, 1976

Years	ler ElPt	by ERI	al materity	by EIP†	by ERI	at mainrib
Up to 5		11;	121	13	13,	13:
Over 5. up to 10		12;	14	13;	13;	14
Over 10, up to 15	13;	14	143	14;	141	14;
Over 15, up to 25	144	14:	14:	· 14 3	15	15!
Over 25	14:	14	14;	15	15	15
f Man aucha 1	00 ma D	-w- 1 -	or nent	hickor in	anak	!

The difference in levels of compensation is not trivial. Sup- non-quota loans A. † Equal instalments of principal. Equal pose a 20-year-old unmarried repayments.

**EUROBONDS** 

# New issue volume hits prices

BY MARY CAMPBELL

WITH NO LET-UP in the pace of nex issue announcements, the ments were \$25m, for Newfound-law stowed increasing signs of strain of U.S. dollar secondary market and Municipal Finance Cord Bank's DM400m. Stancing had contrary to expectation a couple of nex issue announcements were \$25m, for Newfound-law showed increasing signs of strain of part cent. on a final maturity European Investment Bank stowed. That it is the sheer of 12 years, and \$25m, for sweight of now issues which is keeping the market down there for the factors are seen as if snything pointing the other way.

Of the issues which were heining opinions of Friday and Som, for a final maturity European Investment Bank stowed. The formally announced over the factors are seen as if snything pointing the other way.

Of the issues which were prized last week, both tranches of the Michelin were heining quored on Friday and the stancing and the stancing of the Michelin were heining flow on their offering prices of spanned were prized last week, both tranches of the Michelin were heining flowed on Friday and the factors are seen as if snything pointing the other way.

Of the issues which were heining of the Michelin were heining the meriting is delicated at \$percent via Orion. For the factors are seen as if snything pointing it to the case of the new isometer to their stancing and the Michelin were heining with the made in U.S. special and the meriting is delicated at \$percent via Michelin were heining with the made in U.S. special than the michelin were heining with the made in U.S. special than the miche

**NEW YORK** - DOW JONES

Ind. div. vield %

Indices

94.52 93.59 93.43 92.95 92.41 92.22 94.52

πدما .

Aug. 13 + Year ago (approx.)

4.56

High Low

High

N.Y. S.E. ALL COMMON.

55.95 ; 55.45 - 65.50 - 54.92

TORONTO Industria:

MONTREAL

207.65 (19/0) 176.62 (2/1) 199.76 (20/6) 175.67 (2/1)

197.46 (20/2) 176.01 (2/1)

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Rises and Falls

JMRn 521

Sept. Aug. High

188.08 187.86 187.27 187.10

Apstralia a 604.75 502.25 522.55 445.52 Spain (2) 79.82 80.06 100.13 73.22

Belgium # 96.02 96.88 115.12 95.43 Sweden (4) 431.94 457.72 476.95 535.35

JOHANNESBURG Goid 127.9 | 151.5 | 124.5 | 120.5 Industrial= | 189.2 | 181.2 | 180.7 | 178.5

					JOHANNESBURG		AUSTRALIA	<u>.</u> .
AUSTRA	LIAN	WEE	KLY LIST	• .	. MINES		bert i	Anet !
		Aug. Zi	Australian S	Sept. 9   Aug. 211	Scot. 3	130 -0.65		
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		11.72	Kiwi Int	;U.90 ; ;0.96	Charter Consolidated	7.83 +0.1B	Adequate Brighton Cent / Ce.	
vertuerNewspaper	11.28		M.L.C.	- ^ \ \ 100	Read Driefonicka		Mind Unity-Prog. Index. 5 ?	
жt Тыкырыт;		11.16		0.58 :0.58	Elshurg		Amary haplaneless	11.2
ad. Securities	+0.48	:0.49	Mauri Bros	10.00	Razmopy ,	3.90 441 -0.72	to the Bulletine	:0.66
ret. Guarantee ·	;1.92	+1.80	Mayne Nickless	,	Kingas		Asset, Minerals a	15.2
est. Paper M'ni'rg	:1.52	· +1.76	Sylex Corporation	10.57 10.51	191	3.20 -0.40	Assec Pulp Paper Shamed	0.9
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smble look		, :1.88	Oversee Corporation.		St. Helena	13.25 - 10	Aust Foundation Investiga-	+0.92
irne Philip		2.58	Petersville		Southvaal			
rrenter W.E		1.45	Queensland Cement	11.55   11.60	Gold (Golds SA	12.75 - 12.71	بسود ستست سيسيب بالمسينا بالأملاب	11.10
erlemente Perkins.		13.93	QBE	†1.14   †1.15	Union Curporation	2.34 -0.15	And this instrument	10.15
		12.60	Rucia Industries	10.80 :1.10	De Reers Deferred	วา: ย.83	Mus Metal list:	10.97
al & Allied		15.42	Swan Brewery	+1.48 ; <b>†1.48</b>	De Hoels District	2 90 -0.14	Bougant Blet of terms	1 L,45
mmercial Bank		+0.45	IV Corporation	+0.90 i t <b>0.82</b>	Kisvooruuzirii	+3.23 -0.95	Broken Hill Progretary	19,0
mmercial Loug	10.45	TU.40	Thiese	40.00	East Rand Pty		HH, South	12.10
արատվանի ընդանա		÷2.30	I Dien Tene		Free State Gestuld		Carlton United Brewerges.	12.0
race Brust		÷2.45	Thomas Net. Trans		President Brand		(i, J. Coles	†1.32
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		7 Buser.	: Selier.	-	Western Deep	9 <u>.:3</u> −8.35	Contain Australia (20	12.03
		, majer.	• • • • • • • • • • • • • • • • • • • •		INDUSTRIAL		Charles Rather & L	71,25
-		'	•				Parting.	10.73
					African Explos, and Chen.		Euter Smith Stemmen	12.15
					Apple Amer. Industrial .	764 U.U.	h / lateral man	15,90
					Barlow Rand	2.23 -0.10	K. A. I. 207 1	711.85
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A A A A A A A A A A A A A A A A A A	V CT	ACK.	こんしけいかじた		Currie Finance	0.43	Hamersley	12.46
JEL AYI	A 21	UUR	EXCHANGE	•	De Beers Industrial	16 10 j	Hearker	ī 1.0s
					Edgar, Consolidated Inv.	2.10	L.C.I. Australia.	11.74
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Compage		ւ 5 տոլին։	Company	berg. 5: un the	Federale Volksbelenging	11.85	Litter-Capter	0.50
Comfact	197			1976 week	Gien Anil Developmeni	N 35		
•				'	Greatermans Stores	3.00	Jenntogs industries	11.60
			Investment Company	ien '	Guardian Assurance (SA)	1.10 +0.03	distress (Darrels	73.18
enking, Insurance		- 1	Bank Leum luved	181.5+8.0	Ruletts	205 -0.93	Metals Explorer for	10.65
	• ,		Thecount Bank Invest	Br. 201 —	LTA	1.28 +9.0	MIM Heatings	12.56
nd Finance ank Leum: Le lorsel	່່ອດ	7.5 - 1.0	'CLAL' largel invest	: 208 ' —	McCarthy Rodway	14.40 - 0.0°	Myer Emportung	12.60
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nni Hapesito II nico Bank d Israel		4.5 +2.5	Commercial and	. ! i '	Premier Milling	*3.69	North Broken Hill	72.19
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assueli insurance br		4 -1.5	Eleo Br	304.5 -4.0	Rand Mines Properties	11.72	Proper Concrete	
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Bank Br	, 20	U	Elec. Wire & Cable Br.		SAPPI	1.65	Strucks & Hobbletons	4.0
	:	•	Solei Bouch 10% Prof.		C. G. Smith Sugar		least Simmer	11.86
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		i .	,	168.5 –2.0	Tiger Oats and Natl Mig.	• • • • • • • • • • • • • • • • • • • •	Woods of he	11.30
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and Development	el: 27	_	THE PLANTS OF LIGHT	128 -20	l .			

•	Compact	Sept. 5 of 1976 - 4	n lue	Company •	1976 . week	Gien Anil Developmeni Greatermans Stores	11 Ki 11 Ki 3.06	Jennings Industries	11.60
	Banking, Insurance and Finance Bank Leum: le lorse! I.D.B. Sankholeing Bank Hapralim Bt	207.5 + 243.5 + 266 +		Investment Companies Bank Leum Invest Discount Bank Invest Br. CLAL Israel Invest CLAL Industries	181.5 + 5.0 201 — 208 — 123.5 — 3.5	Guardian Assurance (SA) Rulette LTA McCarths Rodway Nedestal OK Bazzars	1.10 +0.03 2.05 -0.85 1.28 +0.45 10.40 -0.02 1.80 5.50	Jones (Barel)  Al II Honings  Myer Emperime  Area  Actions (international)	11.18 10.68 12.50 12.50 12.20
	Union Hank of Israel Br I nited Mizzahi Bank Hassneh Insurance Br Wolfson Clore Mayer Br General Mige. Bank Br Telahot Israel Mort.	168.5 + 2 320 + 3 94 - 209.5 - 3	2.5 5.0 1.5 2.5	Commercial and Industrial Alisance Tire & Rubber Eleo Br Arganian Textile Br Oubek Br	760 -110.0 304.5 -4.0 272 +4.0 148.6 -4.5 548 -2.0	Proten Holdings Rand Mines Properties Rembrand: Group Reten Sage Holdings	10.46 — 0.19 0.53 — 0.03 1.95 — 0.03 0.57 — 0.03 0.58 + 0.01 1 15 + 0.05	Auch limben Hill Unbirdig Un Sweek Protect Concrete Lectul & Commun Lectul & Commun Action Swellings Mining	12.19 11.08 11.38 11.38 10.67
	Bank Br Land Development			Kiec. Wire & Cable Br Solei Boneh 102 Prof. Br American Israeli Paper Mills	101 -0.5 148.5 + 1.5 225 - 168.5 -2.0	SAPPI C. G. Smith Sugar Soree SA Breweries Tiger Oats and Natl Mig. Unisee	17.65 8.90 5.30 +8.05	Stocks & Hobbings	1.85 1.08 1.90 1.59
	Africa Israel Invest. 1215. Israel Land Detei, B Property and Building Melastrin	145 - 1 185.5 —		Br Kitte	128 -2.0 322 -8.0 185 -2.0 928 +3.0	CANADIAN W	EEKLY	Setback	
	Public Utilizy israel Electric Corp.	182 - 2		Fuel and Oil .	180 —34.0	LIST		Hygrad	<b>e</b> :
I	Sourc	e: Bank Lei	ם נאננו	Israel. Tel 'Aviv.	· ·	Street Se	10 Aug. 27	HYGRADE FOODS, food group, recently	the E
		Sept. 2 Au (1.63 ) 1.	g. 27	Industrials Strai	ept. 3   \$ n. 1 restp   5,54	Argus Corp L d	15 12 13 12 12 13 12 13 12 13 12 13 13 13 13 13 13 13 13 13 13 13 13 13	by Hanson Trust wiper cent, has suffer reversal in third quings, Own Y writes. Net eart \$1.4m. or \$1.37 a s	lte own ed a sin arter ea ork Si lings hare er
i	China Light & Power	23.20 23	 5.00		енденас 1.39 ек Рик	Conwest Exploration		pared with \$1.9m. (	17 \$1.84

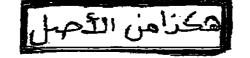
NUMITE. DAMA DEPART	25 1011111111111111111111111111111111111			Stock - Sele	1. 3 Aug. 2
KONG	SINGAPOL	RE STO	Alberta Gas Fa Line A. 14 Argus Corp L. 1 Brit. Cotum. Fele . 13 Bethidiem Copper . 13	127 127 14 131	
Youg Sept. 2 Aug. 2	Sept. 5   8	Bept. 3	8	Can. Packer Ltd	15
i Hubber   1.63   1.55  A Power   23.20   23.00  Properties   1.15m   1.15m   1.15m   F Tannel   18.85   18.85   Surteral   15.85   18.85   Surteral   15.90   144.50   Ingral   15.90   144.50   Ingral   15.90   144.50   Ingral   15.90   16.20   Ingral   15.90   18.60   Ingral   15.90   18.60   Ingral   15.90   18.60   Ingral   15.90   18.60   Ingral   15.90   19.50   Ingral   15.90   16.95   Ingral   15.90   16.95   Ingral   15.95   16.95   Ingral   15.95   Ing	Home Ind	Dunl'pEstate Kompas	1.75 (2.50) 3.18 (12.00) 2.05 - (1.50) (1.15)	Dom. Foundries.   26	221, 3.35 3.35 3.35 3.35 3.35 3.35 3.35 3.3
nieu 2.30 2.30	+ Kuver	t Seller		- FBIG SARed	

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Jonwest Exploration		3.35	
ornet Ind	4.20	14.15	•
r. Zell'rivch Can	<b>Մ</b> ուլ,	ե լույ	Ī
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abrador Mining	+351 <sub>2</sub>	+35 la	
Nat. Drug & Chemical	4.90	15.00	
V. Canadian Olle		81-	
Jakwood Pet	1.52	1.43	•
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reck Curp Ltd		4.00	
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Western Decaits Pet.	6 le	63a	
			ı
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- Dua / Jul			

lygrade RADE FOODS, the B food group, recently acquise by Hanson Trust who own; per cent, has suffered a share reversal in third quarter earnings. Our New York So writes. Net earnings a \$1.4m. or \$1.37 a share own pared with \$1.9m. or \$1.52 share. Sales show an increase to \$132.5m. from \$98.9m. due "the reopening of a 20 group, recently acqui "the reopening of a silaughtering plant temporal closed last year which creat saics but no profit," said ! W. G. Torrace, the treasurer Hygrade Foods. The decree in profits was explained tell due to "the abundance of the making the beef slaughter prices depressed."
Nine months net earning are \$3.7m. or \$3.6 a sha

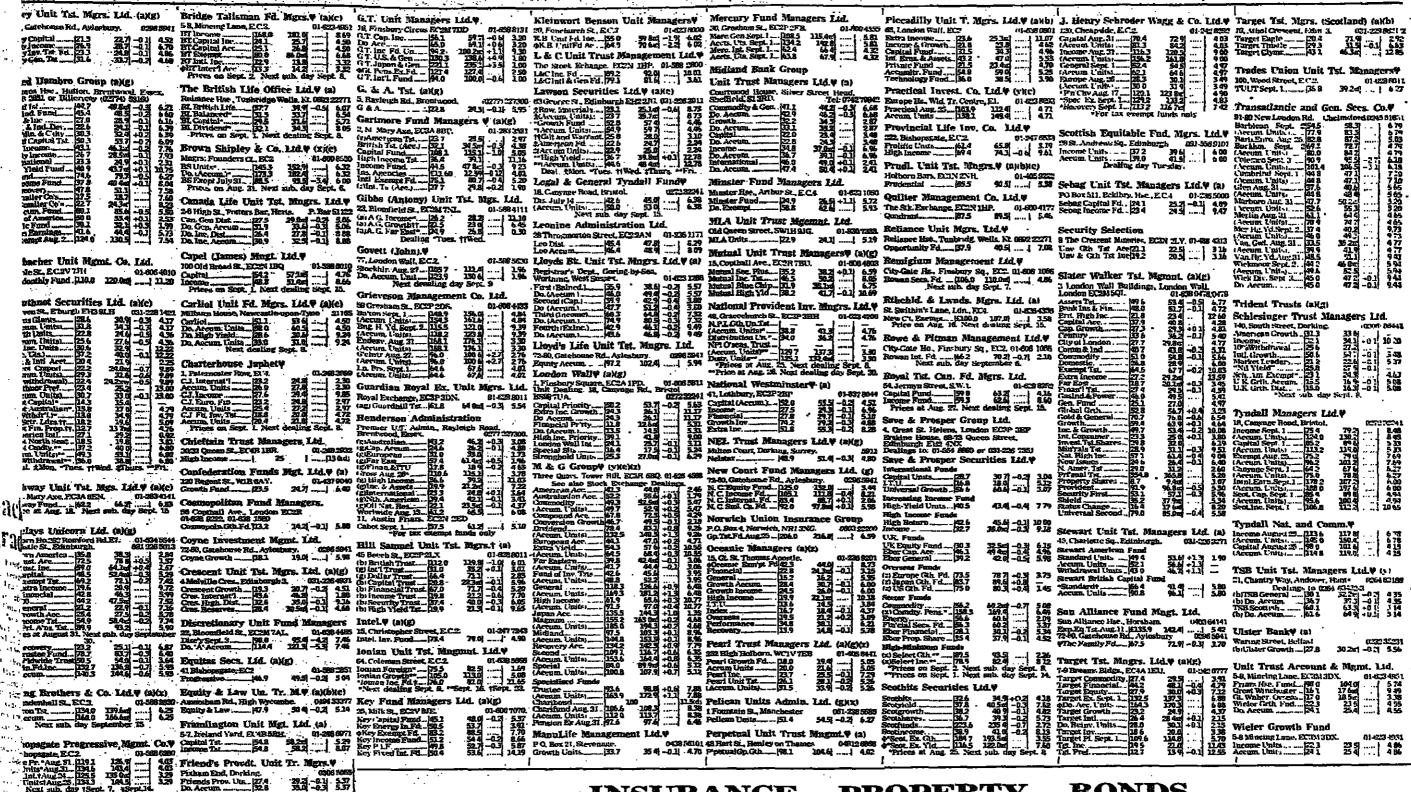
compared to \$4.3m. or \$4.19, share Sales for the sat.

5.97 5.91 3.83 4.56 STANDARDS AND FOORS	Belgium #- 96.02 96.48 115.12 95.43 (021) - 30/81 Denmark #: 108.08 108.74 117.75 100.20	Sweden (4) 431.94 457.72 479.95 355.35 .1356   1-1 Switt 'ri'd of 275.1 275.3 286.0 275.1	Swire Pacific A	Straits Steem 5.4 Petanog Tim. r4.00 straits Limey Sunger Way 1,15	Traders Grp. " 1" 1332 14 Western Double Pet. 619 630	share. Sales for the sale period are \$365.9m. compan
[9]b Sturge mapita(1)	_  19/81 (Iula)	Indices and base dates (all base values	Festite Lorpor Hong Long Wheeks A. Maniell	1975 Lan. 15.50 (Tongkanffar., 11:50	- FBid Saked	with \$293.4m.
Sept. Sept. Sept. Aug. Aug. Aug. High Low High Low	Germany (*) 744.7 740.7 821.7 (27.6)	100 except NYSE All Common— 50 and Standards and Poors 10:	Winson Industrial 2.275 2.10 Wynneor	GERMANY +	PARIS	AMSTERDAM
**Industrial   116.75   116.55   116.50   115.18   114.26   13.58     119.02     101.64     154.65     3.52     14.71     211     111/175   (30)6575     14.71     211     111/175   (30)6575     120.24     120.25     120.	Holland 19 88.6 27.5 100.5 14.5 (5/2) (27/d) (6/2) (27/d) (6/2) (27/d) (6/2) (27/d)	(a) Sydney All Ord. (b) Belgian SE 31/12/6) (d) Copenhagen SE 17/73 (e) Parls Bourse 1961. (f) Commerchank	Ruyer   Seller, susp. suspended.	Prices + or Div. Ykl.	Sept. 3 Fra - Fra s	Sept. 3 Price + or Div.
: (147) · (21) · (11475) (14682	Hongroups 420.55 412.55 403.55 504.55 (1715) (2/1)	December, 1953, (g) Amsterdam In- dustrial 1970, (h) Hang Seng Bank	ze Ex dividend.	Sept. 3 Dm. — : 2 2	Atrique Occad't'ic 587 -2 19.8; 5.1	Abold : F1_0 105.8 + 0.6 204
Sept 1 Aug. 15 Aug. 18 Year ago suppress Ind. day, yield 2 3.49 3.56 3.47 4.01	- Japan; (m) 358.64 358.96 359.61 326.28	31 7/64. (k) Milan 2/1/73. (m) Tokyo New SE 4/1/68, (n) Straits Times 1966. (p) Madrid SE 21/12/74. (q) Stockholm	CORAL INDEX Close 351-356	Albanz Verstch	Air Liquide 344.9 = 0.1 16.5 4.7 Agnitaine 308.6 + 0.6 22.5 7.2 Beehin 77.1 - 1.1	Akro (Pl.20) 32.5 - 0.1 21 Akron Bak(Fl.80 306 21 21 Akron Bak(Fl.80 52.5 - 0.3 438
Ind. dr. vield ; 3.49 3.56 3.47 4.01 Ind. P.E Estro 11.80 12.51 12.83 10.57	Singapore (# 267.72 286.66 286.16 286.35 15/31   271	Industrials 1/1/58. (r) Swiss Bank Corp. 31:12/58. (u) Unavailable. : Excluding		BASF	B.S.N. Gervala 640 ,+11 57.8 5.9 Carrelour 1.430 +1 57 4.0	Van Berkels FLbC 106 +2 12
149; 1507, Bond vield 5.29 5.32 5.34 5.63		bonds. * 400 Industrials. † 400 Inds., 40 Utilities, 40 Finance and 20 Transport. (c) Closed.	LG. INDEX 01-351 3466 DECEMBER TIN 4563-4610	Bayer Vereinsbk. 295 +1 20 2.9	Chargeurs Reunis   180.1 -0.4   16.5   5.2     Chargeurs	Bigenkur 171,24, 93 214 Hoka West m. Fl. 6. 100.2 + 3.2 57; Bulirus Tetterate, 67 + 1.4 23
	· · · · · · · · · · · · · · · · · · ·			977 9 62 15 38	C.G.L	Filsovier (FL2th 270 +5 18   Frame V.V. Rearest 108.2 +0.2   285
OVERSEAS SHARE INFO	DMATION		Investment premium based on	Demag 158.2 + 1.2 16 5.0 Deutsche Bank 292.6 - 1.9 20 5.4	Oredit Poncier	GintlinendesFi,Ki 55 +0.4 20
•		. 2016	\$2.60 per £1—109% (108½%)		Gal. Latevette 68.1' 1 -	1045.15.606
NEW YORK High Low Stock Sept.	High Low Stock 5	High Low Stock 5	High Low Stork 3	Gutehoffnung 188.8 +2.8 14 3.7 Hapag Lioyd 107 12 5.6 Harpegen Dm 100 152 +2 9 5.9	[meta]   115  +1.4  4.95, 3.9	H'nte Istagias Fig. 27.5 +0.5 11 1.11.C. Holland 16.5 -0.7 10
1976 Shock Sept. 7934 4358 Corning Glass 7419	961 <sub>2</sub> 821 <sub>4</sub> Johnson Johnson 90	4018 2718 Kepublic Steel 5519 8814 6934 Keylon 6618	681 <sub>2</sub> 491 <sub>4</sub> Xerox	Hoeehst	Lefarge 194.5 0.5 15.75 8.5 L'Oreal 907 -5 15 1.7 Machines Bull 35.2 +0.8 1.5 4.5 Mitchelln B 1,307 +12 2734 2.1	iat. Mollen F1.30 40.4 + 0.7 10
52 575, third Late 52 3756 2156 Crane	5012 225g Joy Manufactur's 4354	4259 2218 Reynolds Metals 4178 6814 5514 Reynolds R. J. 5934 2614 2138 Rich sons Merrel 2012	405g 255g Zenith Radio 324 91 871g Chile 33 1935 191 925g 881g U.S. Treas, 43 1880 † 925g		Nost Hannament   606 . 2 2 : 116 2 3 1	ARLAGI INSTRUCT 54.3: +U.0   40 (
55 221 \text{\text{tim Lite & Cas.}} 3216 411 1956   Cummins Engine 4034 59 2 5514 \text{\text{\text{Trainet & Gas.}}} 4616   1654 10   Curtiss Wright   1616	16 812 Kanser Industries 15 g 46 4 32 Kanser Steel 42 4	2614   2135 Rich sons Merrel   2012   3273   2335 Rockwell inter   2814   7624   52 Rockwell inter   5414	925a 881a U.S. Tress 42 1860 1925a 186 lg 795a U.S. Tress 42 75/65 86 5.575 3.522 U.S. 90 day bills   5.092	Kaufhet	Pechiney	9.640 (1.140 ) 99.91-0.1-1 min
34.5e 171; \text{\tex{\tex	55g 21g Kay	495g 4154 Royal Dutch 475g 145g 1014 Royal Togo 1012		Krupp Pri Dmili) 114.5 – 0.5 –   Krupp Pri Dmili) 1265 – 4 20 3.8   Linie 206 – 16 3.8	Redoute 592  -4   22.5; 3.8	Nijventale T. Cale: 45 -0.4 -1. OCK. (P12): 177 +2 283 Van Ontmeren 208 +2 105
431; 261; Allegheny Lillin. 551; 731g 5134 Deere	33 181g Kirlde Walter 5034 471g 565g Kimberty Clark 577g	147g 9 Ryder System 137g 485g 395g Saleway Stores 425g 497g 351g St. Joe Minerals, 395g	CANADA	Lowenbrand 16 3.8 Lowenbrand 1800 1.11 20 1.1 Luthans 99.5; +1.5; 4 2.0	Sacilor S.A	Pakhoed (F120) 93 +2 207
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601 <sub>3</sub> 461 <sub>4</sub> Annax	241 <sub>2</sub> 175 <sub>8</sub> Kmeer Co 261 <sub>8</sub> 221 <sub>4</sub> 193 <sub>4</sub> Levi Strauss 197 <sub>8</sub>	410 514 Saul Invest 256 819 534 Saun Inds 454 24 1718 Schittz Brewing, 1819	5.37 2.90 Aguico Eagle 3.20 2958 1954 Alcan Aluminium 2658 2854 2378 Alguma Steel 2458	Metalge Ischart 237 10 - 18 2.1 Neckermann 29.5 + 1 y-	SWITZERLAND®	Itolineo (Fl.50)
241: 1554 Amerida	one i mana immediation of	96/g 70 Schlumberger 96/g 19/g 11/2 SCM 18/g	†3312   21   Asbestos	Preumag Dm. 100 143.5 + 5 7 4.9 Rhein West Blect 154.5 + 1 17 5.2	Price   + or   Div. Yid.	Slavenborg's Buls 251 193 Tokyo PacHirsSii 100 —1 101
361: 30m \mer. Can 35ig 16114   125   Du Pont	SOL LAS CHUIRIS I SZI.	241g 1414 Scortt Paper 1914 1838 1134 Scortli Mrg 17 71g 434 Scordd'r Duo Vest 71g	43 3712 Bank Nova Scotts 4234 12 712 Basic Hesouries. 978 5018 43 Bell Telephone. 5018	Sciering		Uniever (Pl.20) 118
2819 3312 Amer.t. ramambel.; 27 1112 712 (Dymo Industries; 913 2513 201) Amer. Elev. Pen. 2258 2519 Kagte Picher. 3442 415; 51 Amer.cant.Express. 4144 11 442 Kast Ar Lines 913	191a 14 Loue Star Inds 161a	371g 14 Sea Containers 3614	284   151 <sub>2</sub>  Brew Valley Inds.   235 <sub>4</sub>	Thyseen 121.7 14 5.7 Verein & WestBk 314 +2 20 2.9	Bairy Hid	- 24
37': 31 tage. Home Prod 343 118's 93's Estama Kodan. 95's 10's 5's tage. Medical 105's 44's 29's Estam 42	297g 217g Louristan Lend 27	1734 1254 Searle (i.D.) 127g	113g 83g BP Canada 834 13 93g Brascan 105g	MILAN	Ciba Geigy	Sept. 3 Price + or Div.
7:1 43g Anner, Maters 5 195g 135g 15 G & U 165g 15:5 165g Anner, Nat. Car 565g 15:5 113g 16 Price Nat. Gas. 144g 28 165g Anner, Steinhand, 265g 44 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	1719 1314 Linety Stores 1314 2478 1352 L'kenYoupest'wn 17	354 2212 SKDCO 2834 70 4763 Shell Gil 6934 33 2754 Shell Transport 2812	5.50 5.0 Brings 4.00 51 27ag Calcary Power 287a 113g 83g Canada (ement 10	Sept. 3 Price + or Div. Yid.	Credit Suisse 2,560 - 15   16   3.0   Pischer (George).   660 - 25   -   -	Bergen Bank 110 9
32 a 241; American Stores, 29-4 501; 59 Kmery Air Fright 59	71: 414 Mac Millan 558 381: 2639 Macy R. H 301: 405: 29 Mirs Hannver 36	244   155g   Signal 214g   413g   32   Signal Corp 405g	9 4 4.70 Canada N.W. Land 83s 29 245g Can ImpHuk Com 27	Alitalia Priv 600 - 60 ANIC 540 - 3	U'nd, Mag, Jel FiC 1,105 - 50 19 1.7 Hoffman La Roche 76.000 + 500 550 0.7 Intertool B	Creditions 122
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427, 54 Recton Dickinson, 575, 287a 187a Frackatt	361g 5014 Nation Chemical 323g 165g 95g National Can 145g	363, 18 Sundstrand 33 344 244 Syntex 25	903, 72 Ford Motor Can.   †d7 2212 205g   tienstar	Montedisor	Assa (Kr50)	Olletstrik
25; 10 Bengart Core B 154 1756 1054 G.A.F		7 5 Technicolor 478 67 4414 Tektronia 594	35 271g Gulf Oli Canada 271g 814 57g RawkerSid Can 6	Olivett, Priv	Billeruds 206 —1 812 4.1 Bolors 9 5.3 Cardo 45 +5 9.5 2.7	Soph, Berendsen. 320 +2 11 Superfor
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351 30 Gampleil Supp., 35 114 65a Global Marine. 171s 191a 13 Gamplan Partie, 183a 29 18 Gambriel R. F., 281s	271 <sub>2</sub> 17 Ugilvy Mather 261 <sub>2</sub> 19 161 <sub>2</sub> Ohm Edwon 181 <sub>4</sub>	2612 1678 francous tat rul; 20 16 103: fraus World Air.; 1134 374 25 fravelers	4712 314 McIntyre Purpus 3212	Bekart "B" 2,010   -5   105   5.2   CBL (CieBriamb) 1,835   + 15   110   6	TOKYOI	Sanco Mercandi (1.000) 895 Sanco Occidental 381 Sanco Popular 462
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1856 14   Irriminal   1712   22   15   Certain   1861   2672   1773   Initia Western   1874	7:2 51g Pau LauWersi Air 55g 55;2 21:1 Perker Hanning 325g	4814 4215 Unilever XV 4412 1054 812 Gmon Hangap 1015	25 a 16 Pan Can Harling 23 to	Ereditlank 6,000 246 4.1	Honds Motors 683 —11 18 1.5 (	Pagados 610 +1
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64. 25:1 Cheschrigh Point. 2714 22:3 1714 Harmschieger 1814 40 5411 Chesche Statem 36th 54th 41:3 Harris Correl 523	345; 1918 Pennzoll	915 76 Union Parafe 567g 25g 11g Unkmamerica 15g	1014   81g   Price   1014   84g   1114   114   1144	Pieux Franki 4,860 —30 275 5,6	Comateu 424 —1 18 2.1 1 Kubota 355 —2 15 2.2 1	Spanola Zing   170
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71 41 Columbia Piet. 51g 58t 41 Iniant Steel 50ta 11 85 Comine Cond Ami 115g 13tg 83g Justice	18 1312 Pitter Bowes 1472 4710 51 Pitter Bowes 3818	2518 1719 Warnet-Commu. 1819 3819 2919 Warnet-Lambert 3438	2.66 1.55 Steep Block Iron. 11.91 174 64 Sunningdale Orbs 17	Cradicanatali 538 TO BO	bisio Marine 416 _ 3   12   4.1   S	niace
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29 24:1 topol Nat. Ges. 28:1 36:3 24:1 free	995; 817g Prostertiamble 9512 211: 175g Pub. Serv. Flort.: 207a	471g 3154 :Westvaco	9 75; Union Gas 9	NOTES: Oversuas priess exclude \$ 5	Yen 58 denom, unless otherwise etc.	rois
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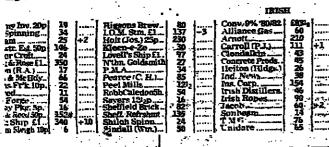




# AUTHORISED UNIT TRUSTS



### REGIONAL MARKETS



### BASE LENDING RATES

llied Irish Banks Ltd. 101%.	Julian S. Hodge 111 Hongkong & Shanghai. 101
merican Express Bank 101%	Hongkong & Shanghai. 10i
.nclo-Portuguese Bank 11 %	Industrial Rank of Scor. Tol
leary Anshacher 11 %	Kevser Ulimann 11
anco de Bilbao 101%	Knowsley & Co. Ltd 121
ank of Cynrus 11 %	Lloyds Bank 104
ank of N.S.W 101%	London & European 11
anque du Rhone S.A. 11 %.	London Mercantile 111
arelays Bank 101%	- Midland Bank 104
arnett Christie Ltd 12 %	Samuel Montagu 10
remar Holdings Ltd. 114%	Morgan Grenfell 101
rit Bank of Mid. East 101%	National Westminster 10
rown Shipley 11 %	: Northern Comm. Trust 11
anada Permanent AFI 101%	Norwich General Trust 11
apitol C & C Fin. Ltd. 13.%	Portmen Guaranty 94
ayzer, Bowater Co.Ltd. 11 %	P. S. Reison & Co 10
edar Holdings 11 %	Rossminster Accept'cs. 10
parterhouse Japhet 11 %	Schlesinger Limited 11
E. Coales 11:5	E. S. Schwab 12
onsolidated Credits 11 %	Security Trust Co. Ltd. 12
poperative Bank "101%	Shenley Trust 121
printhian Securities 104%	Standard Chartered 10
redit Lyonnais 101%	Trade Development Bk. 103
R. Dawes 113%	Twentieth Century Bk. 124
unous Inuria 1010	United Bank of Kuwait 10
uncan Lawrie 101%	Whiteaway Laidlaw 11
nglish Transcont 11 %	Williams & Glyn's 10
rst London Secs 101%	Yorkshire Bank 10
none Gibbs 11 %	
oode Durrant Trust 11 %	Members of the Accepting Hou-
reyhound Guaranty 101%	* 7-day deposits 6!" 1-month depos
rindleys Bank	alt:
airness Mahon 101%	? 7-day deposits on some of \$10,000 a
ambros Bank 101%	under 64%, up to £25,000 71
il Samuel\$101%	OVER 123,000 /.
Hoare & Co	F Demand deposits 8%.  Call deposits over £1,880 61%.
unate of Co	+ Cutt recharite over 11/200 of er

# INSURANCE, PROPERTY,

### BONDS

Prop. Equity & Life Ass. Co.



The City of Westminster Assur. Soc.♥ Hambro Life Assurance Limited ♥ Lloyds Bk. Unit Tst. Mngrs. Ltd.

| Crescent Life Ass. Co. Ltd. | Frish Life Assurance Co. Ltd. | New York Add. Quarter States | New York Ass. Co. Ltd. | N Eagle Star Insur/Midland Ass.

1 Threadneedle St. EC2

1 Threadneedle St. EC2

2 Cornhull Econg. 10554 106.94

1 Threadneedle St. EC2

3 Cornhull Econg. 10554 106.94

Next sub. day Sopt. 15

120.8 1213 +0.21

General Portfolio Life Ins. C. Lid.9

Whetheless Cornhull Econg. 10554 106.94

Next sub. day Sopt. 15

General Portfolio Life Ins. C. Lid.9

Whetheless Cornhull Econg. 10554 106.94

Next sub. day Sopt. 15

General Portfolio Life Ins. C. Lid.9

Norwich Union Insurance Group

General Portfolio Life Ins. C. Ltd. 9

60 Bartholomew Ct. Waithem Cross. WX31971
Portfolio Pund | 98.5 0.7 | | Migdal Hee, Fundory Sq., EC2 | Migdal Hee, F

_	M & C CTOOP?	Equay Fund (A) 1218 -1.3 - Money Fund - 1222 +0.2 -
	Three Quays Tower Hill ECSR GBQ 61-626 4588	Money Fund
	Jers Pen Sept. 3 126.3 130.1 -0.4 Cs. Dp. Pd. Sept. 1107.4 112.8	Money Fund (A) 122 1 -0.2 -
	C. Dp. Pd Sept 11074 1128	Actuarial Fund 100 — 6Retire Annuty 155.2 —
5	Equity Ed. Sept. 2 \$7.3 102.0 — Finly 77-90 Sept. 2 98.5	oRetire Annuty 155.2 —
_	Fmly. 81-86 Sept. 2. 121.0	Atlantic Assurance
	Int Bds Sept 2 B1.7 85.9	
	Mngd Bds Sept 3. 109,4 114.9 -0.1 -	# 131 fet - 11 102 0 07 7
	Property Sepi. 2 125.3 132.8	Vinv. Fd. Uts 1134
	• • • •	Pension Fd. Uts 1101
55	Magna Assurance Company Ltd.	Conv Pens Fd 1187
~	18. Chequers Sq., Uxbridge, Middx. 52181	Cnv. Pas. Cap. Ut. 115.2
	Building Soc.Bd. 1144	Cnv. Pns. Cap. Ut. 1152
	Marua Man Fd 129.4	
		Prop Base Can Her 114.6
•	Merchant Investors Assurance	Prop.Pens.Cap.Uts. 116 9 — — Bdgg. Soc. Pen. Ut. 189.2 —
	126. High Street, Croydon. 01-689 9171	Bdg Soc. Cap. Ut
		Prudential Pensions Limitedo
	Conv. Dep. Fd	
	Mer. Inv. Map. Fd.   804     -	Holborn Pars, ECIN 2NH. 01-4059222
	Ner. Int. Ply, Bd 120.5 +0.5	Equity Fd. Aug. 18. [16.40 16.91
		Equity Fd. Aug. 18. (14.40 14.91
	Prop. Pens. 120.7 +0.8 -	
	Man Pens 99.0 +0.1 Equity Pens 112.7	Reliance Mutual
	Con+ Dan Done 1 1104   +87   -	Tophndge Wells, Kent. 0892 22771
	Mon. Mki. Pens	Rel Prop. Bda 167.4
	NEL Pensions Ltd.	Royal Insurance Group
	NEL Pensions Ltd.	1. North John St., Liverpool. 051 236 6622
	Milton Court, Perking, Surrey. 5911	J. North John St. Liverpool. 051 236 6022
	Militon Court, Dorking, Surrey. 5911 Nelex Ace, Units   76 8 88.8 +1 0   Nelex Camiai   159.2 62.3	1. North John St., Liverpool. 051 236 6622 Royal Shield Fd [180.4 185.2]
	Milton Court, Dorking, Surrey. 5911 Nelex Acc. Units 76 8 88.8 +1 0 Nelex Countal 59.2 62.3 Next, sub. day September 25	I. North John St. Liverpool. 051 2366022 Royal Shield Fd. 1180.4 185.2
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50 38	Milton Court, Dorking, Surrey.  Nelex Acc. Units	1. North John St. Liverpool.  Royal Shield Fd. 1860.4  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.2  185.3  185
50 38	Milton Court, Dorking, Surrey.  Nelex Acc, Units	1. North John St. Liverpool. (551 256 6622)  Royal Shield Pd. (180.4 185.2)
50 38	Milton Court, Dorking, Surrey.  Nelex Acc, Units	1. North John St. Liverpool.  Royal Shield Fd. 180.4 185.2   1
50 38	Milton Court, Dorking Surrey.  Nelex Acc. Units	1. North John St. Liverpool.  Royal Shield Fd. 180.4  Save & Prosper Group*  A.G. St. Helen's London, EC3 01-588 1717  Eal fay. Fd. 1826 1945 +0-3 -  Propert Fd. 1826 177  Equity Pen. Fd. 1826 177  Equity Pen. Fd. 1820 177  Equity Pen. Fd. 1820 1558 1 -  Propert Fen. Fd. 1820 1558 1 -  Except Fd. 1830
33 33	Milton Court, Dorking Surrey.  Nelex Acc. Units	1. North John St. Liverpool.  Royal Shield Fd. 180.4  Save & Prosper Group*  A.G. St. Helen's London, EC3 01-588 1717  Eal fay. Fd. 1826 1945 +0-3 -  Propert Fd. 1826 177  Equity Pen. Fd. 1826 177  Equity Pen. Fd. 1820 177  Equity Pen. Fd. 1820 1558 1 -  Propert Fen. Fd. 1820 1558 1 -  Except Fd. 1830
33 33	Milton Court, Dorking Surrey.  Nelex Acc. Units	1. North John St. Liverpool.  Royal Shield Fd. 180.4  Save & Prosper Group*  A.G. St. Helen's London, EC3 01-588 1717  Eal fay. Fd. 1826 1945 +0-3 -  Propert Fd. 1826 177  Equity Pen. Fd. 1826 177  Equity Pen. Fd. 1820 177  Equity Pen. Fd. 1820 1558 1 -  Propert Fen. Fd. 1820 1558 1 -  Except Fd. 1830
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33 33	Milton Court, Dorking, Surrey.  Nelex Acc. Units	1. North John St. Liverpool.  Royal Shield Pd.   180.4   185.2            Save & Prosper Group*  4. Cl. St. Helen's London, EC3  Bal lav. Fd.
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2.3.4. Cockspur SL\_SWIY58H Maple Lf. Grib 137.1 Naple Lf. Mangd 98.9 Maple Lf. Edgr 90.8 Persni. Pn Fd 141.0 Target Life Assurance Co. Ltd. Target House, Gatchouse Rd., Aylesbury Bucks Aylesbury 0296 Transinternational Life Ins. Co. Trident Life Assurance Co. Ltd. Tyndali Group♥ 18 Canyage Road, Bristol.

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01-680 0606 Sun Life of Canada (U.K.) Ltd.

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Abbey Life Assurance Co. Ltd.

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### **OVERSEAS OFFSHORE** AND FUNDS

FINANCI	AL T	IME	S 51	LOCK	IN	DICE	<b>:</b> S
	Sept.	Sept.		Aug.	Aug.	Aug.   26	A Year.
Inuncat Sees	61.83	61.84	61,86	61.72	61.74 <sub>i</sub>	61.59	61.63
l latered	61.15		61.23	61.51	61.26	61.21	
arial Ordinary	353.6	355.8	351.1	350,8	352,0	556.3	
Munes	97.6	98.2	95.7	87.2	84.7	8.68	
Dr. Yield	6.28	6.24	6.32	6.83	6.29	6.23	
pg-Y'ld Zaullan	18.31	18.20	18.45	18.45	18.28	18.05	
latin (per) (a) (b)	8:09	8.13	8.03	8,02;	6.09	B.20	-
ges marked	5,864	4,193	3.972	4.116			6,312
Contraver Em	_ i	37.66	25.96	28.05	55.32		
c largains total.		9 440	8.001	8.823	8,408	9,763.	14,004

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10 a.m. 353.9. 11 a.m. 353.3. Noon 555.9. 1 p.in. 352 5. 2 p.m. 352.2. 3 p.m. 352.5. Latest Index 31.748 8028. ta : Based on 2 per cent. corporation tax. (h: Nil = S.C.). 12.0 S.S. SE Activity life. Picc. 18.25.

	19	76	Since Con	npliation		Sept.	Sent
- ;	High	, Low	High	Low		-3"	Sept
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Int	<b>64.48</b> (2/2)	89.75 (2/1)	150.4 (26/11/47)	50,58 (3)1/75)	Speculative	35.4 87.9	55. 95.
rd	420.8 (45)	350.8 (31,8)	545.8 (19)6(72)	49.4 (28 <del>/6/4</del> 0)	Gill-Edged	151.0 123.8	155. 124.
Lines.	246.9	78.8 (25%)	448.5	42.5 26(1071)	epeculative	45.6 90.7	50.

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real Groups,	138.04	139.17	187.63	157.21	138.10	159.58	151.7
	154.90	155.97	153.73	153-59	153,60	155.61	146,1
the farman	6.57	6.62	6.61	6.53	6:61	6.58	6.1
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Milwornspanners	145.24	140.24	144.00	44.00	14 18	14 37	13.9

Achesthool Securities (CL) Limited

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# Flags of convenience ships threat to safety-report

BY JOHN WYLES, SHIPPING CORRESPONDENT

own countries. As a result, other maritime countries, including Britain, have been forced into a competition which has depressed potential Government revenues and failed to maintain employment opportunities for native scafarers.

Tax

At the end of the Second World War, Pananta and World War, Pananta and Honduras were the only significant flags of convenience and together they amounted to wide.

This controversial claim progressive relaxation and modification of standards.

This controversial claim progressive relaxation and more and together they amounted to wide and the field internationally for safety.

On safety and pollution issues, the study concludes of employment and pollution control. However, a global analysis of the costs and pollution control. However, a global analysis of these flags of these flags of these flags of the costs and pollution sources, from the field internationally for safety.

But the federation is successfully the british Government and pollution control. However, a global analysis of the costs and pollution control. Howe

tonnage. Since then, the Liberian Panama and Greece—classified Doganis and Dr. B. N. Metazus; production in the standard of th

# Brussels plan to tax vegetable oils 'will harm food industry'

shipping policies.

"Each country must consider feeling is that, while the farm facing a "difficult and disagree-ing lower its own point of view whether its is better or worse off as a result of flag of convenience shipping and establish

World War, Panama and progressive relaxation and monitoring and establish Honduras were the only fication of standards.

Honduras were the only fication of standards.

Significant flags of convenience of this controversial claim promote to design the progressive relaxation and monitoring and establish its own policies accordingly. The proposal to tax vegetable to outpace synthetic alternatives. Honduras were the only fication of standards.

The proposal to tax vegetable to outpace synthetic alternatives. Honduras were the only first outpace synthetic alternatives.

The proposal to tax vegetable to outpace synthetic alternatives. Honduras were the only first outpace synthetic alternatives.

It outpace synthetic alternatives.

It outpaces synthetic alternatives.

It outpaces were the only first outpace synthetic alternatives.

It outpaces the proposal to tax vegetable to outpace synthetic alternatives.

It outpaces the proposal to tax vegetable to outpace synthetic alternatives.

It outpaces the

Handings and either newly energy composition of the service of cassallines, of chipse and anti-pollution standards in a proper contained in a study to be put limitation of the standards in a study to be put limitation of the standards in a study to be put limitation of the standards in a study to be put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the standards in the study of the put limitation of the put limitation of the standards in the put limitation of the standards in the put limitation of the put limitation of the standards in the put limitation of the standards in the put limitation of the standards in the

# resources

### give out

The proposal to tax vegetable to outpace synthetic alternatives.

# Hops are only here for the bee —in quantity and quality

BY STUART ALEXANDER

MERSEYSIDE Productivity Asso- cations for their future attitude U.K. capacity to produce much ciation has arranged a meeting to employment.

in Liverpool to-morrow to outline Administration of the company to the comp the Government scheme to help Airport licence

to groups of four or more com-panies, employing fewer than 200,

### Jobless warning

The inadequate Government died.

The inadequate Government died.

The inadequate Government died.

The inadequate Government died.

Religious books

unemployment could lead to this youth
year's 200,000 school leavers
becoming unemployable this Defence Secretary Roy Mason was year in sales because Balls autumn, Mr. Michael Jack, breaking Labour Party policy authors are selling their man national chairman of the Young behind a cloak of secrecy over a scripts abroad, particularly in the Conservatives claimed at Natting contract to develon rigitum in U.S. Germany and Sweden residence. national chairman of the Young behind a cloak of secrecy over a scripts abroad, particularly in a Conservatives, claimed at Notting- contract to develop tritium in U.S., Germany and Sweden, as ham at the week-end. School Britain, Mr. Bob Cryer, Labour Mr. Peter Lardi, managing dis leavers were likely to have their MP for Keighley, said yesterday, tor of publishers Marshall, Mo hopes, dashed, with grave implifications of the property of the second contract 
small companies study the possibility of providing joint services
for their offices.

Under the scheme, the industry
Department can give financial aid
Department can give fin a year, according to a report by Coast. Mr. Eric Dyer, airport director.

The number of deaths in the steel industry fell from 41 to 36 in the past year, in spite of the Scun-thorpe disaster, in which 11 men

### Boeing test

The first Boeing 747 arrist powered by Rolls-Royce RES engines has made its initial field Rolls-Royce said in Derby at a week-end. The airliner flew \$ hr. 51 min. over the U.S. Wa

# Pit protest

Villagers in the Vaic of Bebr launched a campaign at the was end against the Coal Board plans to sink a £100m. pit in t

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Business volume up 11% to DM 4.7 billion Customers deposits up 13% to DM 3.8 billion Loans up 15% to DM 2.8 billion Net profit before taxes up 23% to DM 40.6 million Substantial increase in international payments

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Year ended 31 March Turnover (excluding V.A.T.) Trading Profit Profit before Taxation

1976 240,068,000 £7,014,000 £5,411,000

1975 £28,377,000 £4,733,000 £3,485,000

\* These record results achieved by the group's 103 United Kingdom and overseas stores. Overseas profits from trading in 5 countries amounted to 45% of the group total.

★ Accumulated deferred profit of £7,892,000 will flow automatically into future profits.

\* Net assets, including deferred profit and directors' property valuation, over £25 million.  $\divideontimes$  Maximum dividend increase paid. Substantially higher payment when regulations permit. st Turnover and profits so far this year are ahead of those in the corresponding period.

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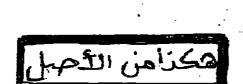
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# Entertainment Guide

DISSUM
ENGLISH MATIONAL DPSKA 3181)
FORISH Wed. and Ser. 7.30 Pon. Glolenna: Tomor And Ref 7.30 Tosca: Thur.
7.30 Tosc Coronador of Foresa.

DELEGIATE (Euston), \$67.9628, Until
jept, 18. Mon. 8.0, Sabs. 8.30, Met.
(St. 5.30 (No per, Thurs.) ONDERGOZA
—Demon Drums (Japan) 17 mus. sins...
sancus. RAYMOND REVUEBAR THEATRE 73.
7593. AF 7. 9. 11 mm. 40Pea Swis,
7594U. RAYMOND PESSENS
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Th. thr. Wed. and Sapt. 16. 17. 19:
FETER MCNERY, SARAH BADEL IN
ROMEO AND JULYET
SEPTEMBER, LYNN FAMILEGH IN
TWELTH NIGHT
SER. 13. 14 115 mee. 12 to 25:
ALAM BADEL IN
RICHARD III
SANOY. 536 5685. Evenings at 8.90. LEFRY. 836 3878. Evenings at 8.0. Mais. Thurs. 3. Sec. 5 and 6.15 sharp. National Theatre Production COLIN SLAKELY in EQUIS by PETER SHAFFER Directed by John Dexter . STUNNING and COMPELLING," Set.

LDWYCH. 836 6404. Int. 836 5332. Royal Shakesbeare Company in Chekhov's Chekhov's (Rod., price preview tonight 7.30). Ist Night tomor. 7.0, perf. Wed. 7.50; in repertoire with Bernard Shaw's THE DEVIL'S DISCIPLE "This triumpharm revival is played by a flawless cast" 7. Etc. (Next peris, Thur, Frt. 7.30, iat. 2.0 & 7.30). SHAW, 01-382 1394, Opens Wed, 7. Subs. 7.0, Mars. Thur. Fri. 2.30, National Youth Thesers in CORTOLANUS 

POLLO. 01-47. 2663. Evgs. 8.00.
Mat. Thor. 3.00, Sat. 5.20 and 8.30.
Pauline Collins, John ALDERTON.
ARE BRILLIANT. D. Evg. In.
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JUNE RITCHIR, ANGELA THEATRE UPSTAIRS, 730 2554. EVGS. 6.15. JUST A LITTLE BIT LESS HAN NORMAL by Nigel Szidwin. HITEMALL SIG 5692-7765. EVES. Satt. 6 and 8.45. Mets. Wed. 3.

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progs. Set. 6 Sun. Fully air-conditioned ODEON HAYMARKET (930 2738/2771 TAXI DRIVER (X: Sep progs Dly 1.30 4.45. 8.15, Ft times Mon Suns, inc. 2.05 \$.20. 8.50. All seats may be booked.

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PRINCE CHARLES, Leic. So. 437 8181. Priore widers 1,30 3.45 5.10 8.35 to reach its peak are likely to PRINCE CHARLES, Leic. So. 437 8181, be underlined by the variations 2nd year. The One and Only Original the underlined by the variations 2nd year. The One and Only Original in the last couple of months in (no. Sun.) 2.45. 8.15, 9.00. Its. 5how. Fri. & Sat. 11.45. Seals Bibble: Use Bar. expectations about manpower SCENE 1. Con. Perts. Div. 12.30 Lte Show Fri & Since August. 1974, a net 12.30 2.55 5.55 8.55 Lte Show Fri & Salance envisaging a rise rather

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Leicester Square Tel. 439 0.791
1. Charles Bronson is St 19E5 (AAI Sep
strops, 2.90, 4.25, 5.25, B.25,
2. REDFORD, HOFFMAN
ALL THE PRESIDENT'S MEN (AAI Sep
pross 2.05, 5.05, 8.05,
5. STANLEY KUBRICK'S
BARRY LYNDON (A), RYAN D'NEAL,
MARISA BERENSON, Folly alconditioned SCD, pross, 2.30, 7.30,
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peris, 2.30, 5.10, 8.00.

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TONAL THEATRE

The Multiple Sclerosis Society of G.B. and N.L.

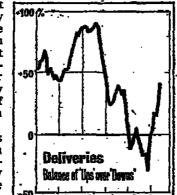
# FT Monthly Survey of Business Opinion

### GENERAL OUTLOOK

# Tone of quiet confidence

THE TONE that emerges most strongly from the latest survey s one of quiet confidence. The indicator of business optimism has registered another slight fall but this is because companies are about as - rather than more - optimistic as they were four months ago. None of the firms interviewed last month said they were less confident.

Engineering firms were less inclined to be optimistic than Deliveries the other two sectors resurveyed last month, principally because they are finding the rate of improvement in the U.K. slower than abroad. The brew-



ing sector has been helped by the fine summer but is worried by duty increases, and the squeeze on real consumer expenditure, while the paper, packaging, printing and publishing sector has been encourupturn.

Export prospects remain ver promising, though the outloo this month has been qualifie by several engineering con panies who say that they no expect their exports to declin during the next 12 months prin cipally as a result of a dro in the flow of contractse.

### C Statistical Material Copyright Taylor Nelson Group Ltd. **GENERAL BUSINESS SITUATION** 4 monthly moving total August 1976 Are you more or less optimistic about Eng g. Brews & your company's prospects than you wentour months ago? June More optimistic 47 82 39 52 53 49 45 80 48-18 Less optimistic

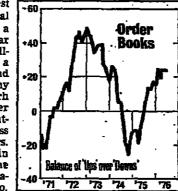
# aged by increasing signs of an EXPORT PROSPECT (Weighted by exports)

y	4 monthly moving total					August 1976			
ik ed n-Over th	e 12 months expo	rts will be:	May- Aug. %	Apr July %	Mar June %	Feb May %	Eng'g. (non-elec %	Brews. & .) Distlirs. %	P.P.P.P.
w - <u></u>		Higher	82	86	88	85	58	100	71
a-		Same	12	14	11	14	7		11
·		Lower	6		1	1	35		18

### ORDERS AND OUTPUT

# A steady recovery

ALL THE evidence suggest that the recovery in industrial activity is proceeding in a Steady rather than a spectacular fashion. About half of the allindustry sample now report a rising trend of orders and deliveries. But almost as many say they do not expect much change in the size of their order books which suggests that output is increasing more or less in step with the flow of orders. The median forecast increase in production/turnover over the next 12 months remains a relatively modest 4 per cent, or so.



Likewise. the answers capacity utilisation and factors affecting production give no indication of a rapid build-up

The summer weather has given the brewers and dis tillers-and the packaging firm supplying the drinks industryan extra boost. But elsewhere in the printing, packaging paper and publishing sector and mechanical engineering generally the pick-up in busi ness is said to be distinctly patchy with some lines benefit ing far more than others.

NEW ORDERS	4	monthly	woring	total		August 19	76
The trend of new orders in the last four months is:	May- Aug. %	Apr July %	Mar June %	Feb May	Eng'g. (non-elec	Brews. 8 .) Distilrs. %	P.P.P.
Up	46	42	44	37	50	87	53
Same	31	34	32	34	14	9	43
Down	15	16	18	23	. 16		4
No answer		8	- 6	6	20	4	

PRODUCTION/SALES TURNOVER	4	monthly	moving	total		Lugust 19	76
Those expecting production/sales turn- over in the next 12 months to:	May- Aug.	Apr July %	Mar June %	Feb May	Eng'g. (non-elec. %		
Rise over 20%	- 5	5	5	3	2		
Rise 15-19%		3	2	3	6		
Rise 10-14%	71	11	10	14	12	9	6
Rise 5-9%	26	24	29	32	58	42	7
About the same	46	46	45	42	20	45	86
Fall	3	3	1	2	2	-	
No comment	8	8	8	4		4	

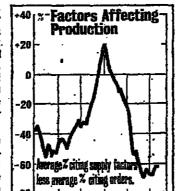
### CAPACITY AND STOCKS

# Demand still main constraint

THE RECOVERY in the level of economic activity has so far more than supply shortages the overall index showed virtually no change this month.

On the supply side, some respondents apparently expressed fears that middle management would become more inclined to change jobs to obtain pay increases they were

CAPACITY WORKING



otherwise denied. But there is little change in the relevant percentages in the replies covered by the survey, apart from a small rise in the number of companies referring to production capacity, though this was still at a low level.

On stocks, there is no real clear-cut trend and the indices of expectations about the FACTORS CURRENTLY AFFECTING PRUDUCTION volume of work-in-progress and stocks of raw materials and components have fallen, but the index for manufactured goods has remained more or less un-

STOCKS	4	monthly	moving t	total	A	lugust 197	76
Raw materials and components over the next 12 months will:	May- Aug. %	Apr July %	Mar june %	Feb May %	Eng'g. (non-elec. %	Brews. & ) Distilrs. %	
Increase	38	37	38	41	8	46	6
Stay about the same	45	48	47	50	46	46	50
Decrease	10	7	9	7	16	8	44
No comment	7	8	6	2	30		
Manufactured goods over the next 12 months will:							•
Increase	25	22	22	27	32	13	38
Stay about the same	45	48	46	45	6	50	49
Decrease	9	7	8	8		36	9
No comment	21	23	24	20	62	1	4

4 monthly moving total

42

]une

May

-53

August 1976

100

61

(non-elec.) Distlirs. P.P.P.P.

50

37

Eng'g. Brews. &

### 4 monthly moving total August 1976 Eng g. Brews. & May (non-elec.) Distilrs. P.P.P.P. 46

### Above target capacity Planned output Below target capacity 32 38 38 22

# Labour disputes LABOUR REQUIREMENTS (Weighted by employment)

Home orders

Export orders Executive staf Skilled factory staff

Manual Labour

\*Components

Raw materials

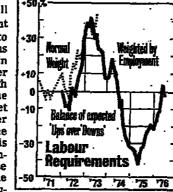
·	. 4	monthly	moving	total		August 19	76
Those expecting their labour force over the next 12 months to:	May- Aug. %	Apr July %	Mar June %	Feb May %	Eng'g. (non-elec	Brews. & .) Distiirs. %	
Increase	21	24	19	20	10	_	7
Stay about the same	56	55	51	47	39	98	. 86
Decrease	23		30	. 33	51		13

# INVESTMENT AND LABOUR Uncertainty about jobs

THE PRESIDENT'S MEN IAAI Pross 12.30 2.35 5.55 6.56 Les Show Fri & Sat 11.55.

See: 11.55.

See: 2. Comt Perts Dly 12.50 Lie Show Fri & Sat 11.50 4.50 4.50 8.45 ENTER THE DRAGON (X: 12.50 4.50 8.45 ENTER THE DRAGON (X: 12.50 4.50 8.45 ENTER THE DRAGON (X: 1.00 6.55 Lee Show Fri & Sat 11.50 4.50 4.50 8.45 ENTER THE DRAGON (X: 1.00 6.55 Lee Show Fri & Sat 11.50 CONFESSIONS OF A DRIVING INSTRUCTOR (X: 2.25 5.50 Paris Bay Elle Marine 1.4 12.45 A DRIVING INSTRUCTOR (X: 2.25 5.50 Paris Bay Elle Marine 1.4 12.45 A DRIVING INSTRUCTOR (X: 2.25 5.50 Paris Bay Elle Marine 1.4 12.45 Lee Show Fri & Sat 11.50 Lee Show Fri & Sat



where more than half the respondents expected a fall in their labour force over the next year. The four month moving total still shows over half envisaging little change in manpower.

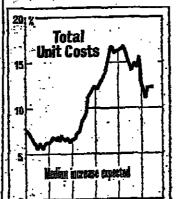
In line with other recent sur veys, more companies are not expecting a rise in capita spending over the next 1 months, and only the engineer ing sector of the three covere this month is still relatively cautious on this issue. Of th weighted total, over two-fifth are envisaging a rise in spend

### CAPITAL INVESTMENT (Weighted by capital expenditure)

ĮΣ-	1.	4	monthly	gnivom	total		August 19	76
	Those expecting capital expenditure over the next 12 months to:	May- Aug. %	Apr July %	Mar June %	Feb May	Eng'g. (non-elec	Brews. & .) Distilrs. %	P.P.P.P
er-	Increase in volume	43	40	30	. 37	13	75	65
ed ly he	Increase in value but not in volume	9.	19	20	27	11	3	26
hs	Stay about the same	24	20	19	. 8	69	14	
d-	Decrease	22	. 28	29	34	3	8	9
	No comment	<del></del>	· -	. 2		4		

### COSTS AND PROFIT MARGINS

# Build-up in profitability



higher than in May.

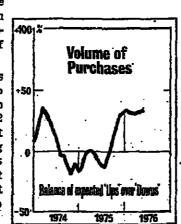
12.7 per cent-in line with the increasing doubts expressed in recent forecasts about the timetable for reducing the rate of inflation. . All three sectors covered this

month were more inclined to expect their profit margins to improve over the next 12 months than they had been last April-some citing the easing of the Price Code as well as the impact of higher export prices. Consequently the profit margins index has continued to improve quite sharply.

These surveys, which are is continued concern over rising Group, are based upon exten. The all-industry figures are median expected increase is sive interviews with top execu- four-monthly moving totals, now 12.8 per cent, over the tives about their companies covering some 120 companies in

This has also affected expecta- companies are covered in turn second months.

THE INCREASED confidence tions about price rises with every month from a sample about the rate of wage increases both the brewers and the paper based upon the FT-Actuarie following the agreement on the and connected sectors envisag- Index, which accounts for abou second stage of the pay policy ing a more rapid rise than they 60 per cent. of the total turn has been maintained this month, had last April. The overall over of all public industria The index for the median effect is that the median companies. The weighting is by expected rise over the next 12 expected rise in prices is now market capitalisation, say



carried out for the Financial where an alternative weighting

now 12.8 per cent, over the situation and prospects. Covering some 120 companies in next 12 months, nearly a point situation and prospects. 11 industry groups (mechanical Three industries and some 30 engineering is surveyed every

	No comment	2	2	2		4		
COSTS	·	. 4	monthly	moving	total		August 19	76
	· · · · · · · · · · · · · · · · · · ·	May- Aug.	Apr	Mar June	Feb May	(non-elec	Brews. & .) Distilrs.	P.P.P.P
Wages rise by:				%	%	<u>%</u> _	%	<u>_%</u> _
	0-4%	22	24	- 37	11	34	9	10
<u> </u>	5-9%	· 43	37	<u>; 31</u>	25	14	85	85
	10-14%	17	20	-34	34	22	2	5
	15-19%	10	9	8	15	30	-	
	20% plus		_					
	5ame						<b>-</b> .	
	Decrease		<u>-</u> -	<del>-</del>				
•	No answer	8	10	· 16	15		4	
Unit costs rise by:	· · · · · · · · · · · · · · · · · · ·			· ·				
	0-4%	. 1	_	-7	7	<u> </u>	4	
	5-9%	16	22	20	20	6	1	9
	10-14%	49	· 45	49	47	64	78	47
<del></del>	15-19%	19.	20	18	14	30	17	8
<del></del>	20% plus	6	6	5	2	_		
	Same	· -	_				_	
	Decrease	,2	2	- 2 -	3		·	
	No answer	7	5	5	7	_	-	36
	<u> </u>							
				::				

PROFIT MARGINS		4 monthly moving total				August 1976		
Those expecting properties to:	ofit margins over the	May- Aug. %	Apr July	Mar june %	Feb May		Brews. & ) Distlirs. %	
	Improve	44	39	40	34	22	5≥	84
	Remain the same	45	44	37	34	76	39	13
!	Contract	9	14	20	30	2	9	3
, .	No compand							

### 0,000 people in the United Kingdom suffer from progressively aralysing MULTIPLE SCLEROSIS—the cause and cure of which are still unknown—HELP US BRING THEM RELIEF months is virtually unchanged at 7.8 per cent. Rowever, there

We need your donation to enable us to continue our work or the CARE and WELFARE OF MULTIPLE SCLEROSIS ufferers and to continue our commitment to find the cause and cure of MULTIPLE SCLEROSIS through MEDICAL

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SANWA BARK The Firencial Times Monday September 6 1979

The Signature of the Company of the TRUSTS-Continued Price - Net Cur Ge's PIE High Law

Figure 1975 - Andrew 1975 - An

# FINANCIALTIMES

Monday September 6 1976



# White House race starts—officially

BY JUREK MARTIN, U.S. EDITOR

weeks, begins his campaign with and border states, which account increase a speech at Warm Springs, for 147 of the total, while success figures.

WASHINGTON, Sept. 5.

THE U.S. Presidential election votes in the College are needed spending inflationary liberal season officially opens to-morrow. to win in November.

Mr. Jimmy Carter. the Demo- Mr. Carter is generally vative exterior. On Friday, Mr. cratic candidate, who has been accorded perhaps insurmount. Carter moved to counter this straining at the leash for some able leads in the 13 southern attack in reacting to the latest perhaps and begins having a property and begins the least for some and begins the least for some and begins the season are also begins to the latest perhaps.

# Arabs to hold Lebanon talks Cairo soon

BY OUR OWN CORRESPONDENTS IN CAIRO AND BEIRUT

FOREIGN Ministers and repre- his house" after he takes office scritatives of Arab League mem-formally in September and also ber-States decided in Cairo yes- to give member-States the terday to hold a summit meeting chance to consult

**Emergency meeting** 

joint shop stewards committee at at Longbridge following the British Leyland's Longbridge breakdown of talks late on Friday

plant in Birmingham will hold over a pay claim by 92 rectifica-

an emergency meeting this tion engineers whose strike

on Leyland strikes

BY DAVID CHURCHILL, LABOUR STAFF

THE UNOFFICIAL but powerful

a speech at Warm Springs, for 147 of the total, while success figures.

Georgia, the site of President in California and New York

Franklin Delang Roosevelt's summer home.

President Ford, trailing by a in a couple of other large states nearly half the Americans substantial margin in most of which traditionally favour Demothe polls, has chosen to avoid crats to be assured of the stump until next week, busy-presidency.

The would only need victories dent Ford. This concluded that to discuss the continuing was announced. Mr. Farouk the following was announced. Mr. Farouk the following was announced. Mr. Farouk the following was announced. Mr. Farouk the stump until next week, busy-presidency.

The would only need victories dent Ford. This concluded that to discuss the continuing was announced. Mr. Farouk the following the third week of October the decision during the third week of October the continuing was announced. Mr. Farouk the stump until next week, busy-presidency.

The would only need victories dent ford. This concluded that to discuss the continuing was announced. Mr. Farouk the decision during the third week of October the continuing was announced. Mr. Farouk the continuing was announced. Mr. Farouk the decision during the third week of October the continuing was announced. Mr. Farouk the continuing was announced. Mr. F but the Bank of England, of course, has a different point of

But a new flare-up is possible

# who say they will not vote two with sum mit new week, busy implication in the White House and sending surrogates to do his work. Mr. Carter or sight have been weekend white most of the same under the sight work. Mr. Carter or sight have been weekend white most of the same under the sight work of the same energy as the single that the first or beautiful sending to the same energy as the sa

Mr. Denis Howell is not the

only man preoccupied with dribbling taps at the moment:

view-it would like to turn the tap on rather than off. The gilts

market has now been in a kind

Mr. Mahmoud Riad, Secretary-Saturday with Mr. Pierre not likely to be blamed for stay-ing liquid, but if he actually sound the market very carefully that the late date for the meet Right-wing Phalangist Party, Mr. ing was intended to give Mr. Sarkis and Patriarch Antonius Elias Sarkis, President-elect of Khreish, spiritual head of the Ebanon, "time to arrange varonite community."

Mr. Mahmoud Riad, Secretary-Saturday with Mr. Pierre not likely to be blamed for stay-ing liquid, but if he actually sound the market very carefully takes a view and goes liquid he They have also introduced a had been successfully play the Lebanon, "time to arrange varonite community."

Mr. Mahmoud Riad, Secretary-Saturday with Mr. Pierre not likely to be blamed for stay-ing liquid, but if he actually sound the market very carefully. They have also introduced a had been successfully play the Lebanon, "time to arrange varonite community." meanwhile, is reluctant to initiing long bonds to the general of almost and outside Floating-rate bonds would a tap if they had not made the had been received at the low institutions to invest with. ate aggressive selling itself.

out actually having to take a issue so far has been heavily drawn from the brief and view, and might also offer a oversubscribed, home for some of the a together

But common excessive reserves of the bank- gest that there could be a ing system, which has grown middle way between a system disillusioned with gilts. How which will only use the tap fund managers the institute doubts about this novelty, and in which will only risk the auction grated into the new issue. spite of a good deal of study the system for three-month bills. grated into the new issue, authorities have still not made. There would inevitably be reperup their minds. After all, if the cussions on the existing gillfloaters went the way of some edged market—yet the price of if the institutions are read

U.K. TQ-DAY

Cloudy, some rain; sunny

London, E. Anglia, Midlands, Channel Isles, S. Wales, S.W., E., Cen. S., E., Cen. N. England

Dry, rather cloudy, sunny spells later. Wind N.W., light. Warm. Max. 20-22C (68-72F).

N. Ireland, S.W., N.E., N.W. Scotland

Mainly cloudy, some rain. Hill og. Near normal. Max. 17C

N.E. England, Borders, Rest of Scotland Mainly dry. Bright or sunny intervals. Warm. Max. 19C

Outlook: Mostly dry and warm Sunny spells in S., changeable in N. Lighting-up: London 20.15 Manchester 20.27, Glasgow 20.40

**BUSINESS CENTRES** 

(66F).

. Wales, N.W. England, Lakes,

Weather

RIGHTS ISSUES

THE LEX COLUMN

When the taps are

turned off

allow institutions to invest with terms so attractive that every offer price

But common sense does sug-He will be accompanied by pean manufacturer to whom I Strong U.S. counter-measures senior officials of the Depart- have spoken admits that it will in the air routes dispute with the ment of Industry. Lord Beswick, be making determined efforts to the making determined to workers idle and halted all main while further talks were held.

At Counter measures to whose strike floaters went the way of some edged market—yet the price of morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will consider ways earlier in the week led to 6,000 recent equity issues the shame a security with a near redemptor of the morning. They will cons

After all, the question right from the beginning. Polymark issue was whet placing of new shares with in tutions, with existing holders having the right to up options on the new ed was really any different from conventional rights issue and written by the same institute happy new issue season summer that in an increase inflexible equity market dor coss. There can be a real ference between a Polym if the institutions are reed become long-term holders in

chief and the content of the content

# Kaufman to visit U.S. aircraft manufacturers BY MICHAEL DONNE, AEROSPACE CORRESPONDENT MR. GERALD KAUFMAN, Minis- Even before his U.S. visit Mr. sions held between the U.K. and

ter of State for Industry, will Kaufman will talk at Farn other European manufacturers, visit the U.S. later this month borough and in London with The French plan has met with discuss collaboration on many U.S. airline and aircraft hostility both on the Continent aerospace programmes with manufacturing industries leaders and in the U.K., and is regarded such major manufacturers as who are visiting Farnborough in by many as driving the U.K. in Boeing, Lockheed and McDonnell greater strength than ever. particular into the arms of the

Every major U.S. and Euro- U.S.

particular into the arms of the

various groups of strikers.

At Longbridge, where 18,000 ment in the strike by 235 electricians at the Lucas Group in Birmingham, which has substricted the strike by 200 Birmingham, which has substricted the strike by 200 stringly slowed component such toolsetters over a differentials stantially slowed component sup-claim escalated when mainten-ance men also walked out, hopes meeting to-day between the elec-are high that the toolsetters will tricians' stewards and manage-

ing further talks. Halewood, Liverpool, are having The maintenance men, who more talks with stewards repre-

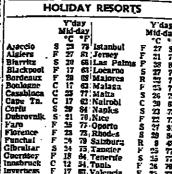
accept their shop stewards' ment.
advice and return to work pending further talks.

Management at Ford's plant in
Halewood, Liverpool, are having

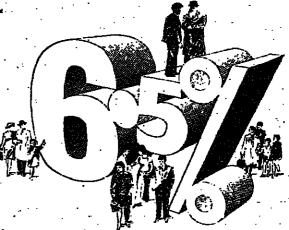
walked out in protest at some of senting about 60 paint shop their colleagues being laid off workers whose dispute over pay by the toolsetters' dispute, are while laid off has stopped work expected to return to normal on the last two night shifts, working if the toolsetters decide losing more than 600 Escorts and

# **Industry activity revival**

# News of the fall coincides with the delayed release of a report by a National Economic Development Office working party which reflects considerable disagreement over whether the supply of clertic instors will again prove a bottleneck in the coming approve a bottleneck in the coming power and the common y received and the provest of the provided by a party of discouraging imports of considerable disagreement over whether the supply colleal, step of considerable disagreement over whether the supply colleal, step of clertic instors will again prove a bottleneck in the coming power about the trade turnround has away of discouraging imports the way of discouraging imports the way of discouraging imports of motors between 1 ph and 5 hp fell by the same proportion in the first half of this year to \$7.5 m. In spite of the depressed U.K. market—the electric motor will be the trade to continuing steadily



# sort of profit should the



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• The Financial Times Ltd.

# Britain's trade surplus in electric motors falls BY CHRISTOPHER LORENZ

added a new element to discussions within the National import figures may reflect stock- creased to meet the true rate of Economic Development Council building by importers in antici- usage in industry during the about the industry's competitive
about the industry's competitive-News of the fall coincides with

Continued from Page 1

A. SHARP FALL in Britain's what they consider economic industry.

1. ade surplus in standard and levels. This would affect exports The report quotes the indusmedium-sized electric motors has as well as the scope for imports. try's view that production capa-

economy recovers. economy recovers. "paper" demand caused by The NEDO report shows that duplicate ordering. But the re-

competitors to cut prices below loss of market share by the UK

Shipbuilding unions

# **Hopes for Namibia**

is continuing to insist that the the release of SWAPO prisoners future of Namibia can only be from South African jails, would determined by Namibians thembe the subject of further negoselves, he is thought ready to tations. appointed to run the industry as ignoring the reality of the industry as ignoring the reality of the industrial problem. Politically it is oseek its own meetings with committee would not need for another, to maintain employment at present levels.

Mr. Airlie said that the combined committee would adopt a flexible response to any threat of redundancies. Stewards would another of redundancies. Stewards would in gand Engineering Unions?

There was also a demand that the comproposed at meetings of workers of the industry.

Given a guarantee of job to take part in enlarged constitutional discussions, probably in the outcome of the Dar-es-Saltam gummit, which seem in the organising committee of to take part in enlarged constitutional discussions, probably in the outcome of the Dar-es-Saltam gummit, which seem in the current to take part in enlarged constitutional discussions, probably in the outcome of the Dar-es-Saltam gummit, which seem in the current to take part in enlarged constitutional discussions, probably in the outcome of the Dar-es-Saltam gummit, which seem in the current to take part in enlarged constitutional discussions, probably in the current sould include not Nujoma is attending, these negotile to take part in enlarged constitutional discussions, probably in the current sould include not Nujoma is attending, these negotile to take part in enlarged constitutional discussions, probably in the outcome of the Dar-es-Saltam gummit, which seed in the organism discussions, probably in the outcome of the Dar-es-Saltam gummit, which is seed in the organism discussions, probably in the outcome of the dar-es-glam mining discussions, probably in the outcome of the Dar-es-Saltam gummit, which is seed in the organism discussions, probably in the outcome of the Dar-es-Saltam gummit, which is seed in the organism discussions, probably in the outcome of the Dar-es-Saltam gummit, which is seed in the organism gummit, which is seed in the organism gummit, which is seed in the organism gummit when the organism gummit wh

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